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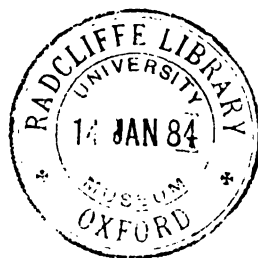


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Original Articles.

THE TRAINING OF NURSES.¹

BY G. H. M. ROWE, M. D.,

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THE subject chosen for this reading is not strictly within the line of work to which this Society is devoted, that of clinical medicine, and I feel like apologizing for its introduction. The members of the Society are, however, aware that the superintendent of a large metropolitan hospital has little time for the conscientious observation of clinical cases. There are problems closely connected with the functions of his office which, by limitation, other members of the profession have less opportunity of studying. I have ventured to depart from the traditions by bringing forward the education of nurses, a subject which, both to physician and patient, is quite as important as drugs or food. I do this in order to make some statements about the present position of the subject in regard to hospital work, the profession, and the public.

It is only ten years since the first training school for nurses was organized in this country. They have passed the experimental stage, but are far from being on a basis that would be considered as eminently satisfactory, either as to organization, methods of work, or results, as shown in the work of graduates in private nursing.

Some of the methods are known to the profession, and in a limited way to the public, sufficiently to judge the system by its results. I forbear to detail the history of the "old system," so called, or to rehearse the causes that led to the establishment of the new. It must be remembered that until 1860 there was no opportunity in Europe or America for an enterprising woman of any social degree to systematically learn nursing unless she entered one of the religious sisterhoods, and the aim of most of these orders was a divided one, their own spiritual welfare and that of their patient.

The work of Pastor Fliehn, begun in 1836 at Kaiserswerth, in Germany, where Florence Nightingale obtained her training, should not be forgotten. This was a semi-religious order, the nurses becoming deaconesses for five years, most of them remaining in the order for life.

In 1860, by the energy of that rare and devoted woman, Florence Nightingale, there was opened at St. Thomas's Hospital in London the first organized training school of merit connected with any large hospital supported and managed by the laity.

This school is not only the pioneer of the modern training school, but is to the present time the model upon which nearly all are organized. The methods and maxims of this school are closely imitated by most others of any pretension or real worth, and its success and results have never been surpassed, perhaps not equaled.

In 1868 a special committee was appointed by the American Medical Association to consider what could be done to begin in this country the systematic training of nurses. Dr. S. D. Gross was chairman of that committee, and at the meeting the following year read a report, which may be found in the Transactions

for 1869. This report was forwarded to all State medical societies, but the endeavor to excite an interest in the subject received no active response.

For many years the Nurses' Society in Philadelphia (the work of the Friends) had been doing unostentatious and quiet work for the Lying-in Charity. The philanthropic pastor and superintendent of St. Luke's Hospital in New York (Dr. Muhlenberg) instituted, in 1845, a semi-religious order of sisters in the English Church. With his death the order waned, and no longer constitutes the nursing force of the hospital.

The success of the Nightingale School at St. Thomas's, and the organization of others abroad, on this plan, gradually attracted attention in the United States.

In 1873 there were opened three well-organized training schools, namely, the Bellevue, in New York, the Connecticut School, in New Haven, and the Massachusetts General Hospital School, in Boston. From this beginning, ten years ago, others have been established until there are now, according to the best information I can obtain, about sixteen schools of size and dignity. The varying conditions under which these schools were commenced led to a basis of organization that was not uniform. They are so different in kind and method as to practically affect their welfare both as to their workings and results, and to leave much room for discussion as to which is superior. I consider this point of sufficient importance to analyze more closely.

In brief there are two kinds of organizations. By one method friends of a given hospital, prominent citizens, the medical staff, and, usually and largely, influential women of social rank and strong personality, organize themselves into a corporation for the sole purpose of establishing a school for nurses. They obtain a charter enabling them to hold funds and property, organize into various committees, secure a superintendent of nurses as their executive officer and instructor, and obtain pupils for training. They enter into a compact with the trustees of a hospital to supply them with nurses, who take charge of the nursing of the patients, subject to the authority of the hospital, its management, and its regulations. In return the hospital remunerates the training school with payment of service, board of nurses, etc. The purpose of the training school is to educate nurses, thus furnishing a better nursing force to the hospital, and supplying trained nurses to the public. The object of the trustees of the hospital is the improved care of the sick.

By the second method the trustees or managing board of the hospital, with the same end in view, undertake to accomplish what in the first case was done under two organizations. It appoints a committee from its own board, whose special duty is to organize and regulate the workings of the school, with an advisory committee from the hospital staff. The school at once becomes an integral part of the hospital, the same as any department of its service. It is in charge of its executive officer, but has its special subordinate head, the superintendent of nurses. It is maintained from the annual income or appropriation. Its pupils are lodged, boarded, and paid from the same appropriation as the other officers and employees.

The methods of instruction, routine of work, experience gained, and results obtained, are practically the same under both organizations, *provided* each system works harmoniously. The difficulty lies in the fact that under the dual plan there are two organizations

¹ Read before the Boston Society for Medical Observation, March 5, 1883.

working under one roof with the dangerous possibility of becoming ultimately involved. The nursing force is in a position to derive authority and execute commands given by two different governments, and only with great tact and forbearance can embarrassment, if not collision, be avoided. This dual system may succeed in a hospital where the wisdom and discernment of the managing board can rigidly enforce the supremacy of the hospital authority, always paramount. With these conditions it can fulfill all purposes, and secure the welfare of the patient.

Such a system to be the best, must have discreet managers in both organizations, and, under all and varying conditions, prove itself just as successful as the second with one central organization.

The management of the training school demands certain recognitions pertaining to the nursing force. The nursing is so closely allied to the general interests of the hospital that the lines of work are almost sure to overlap. The managing committee of the school, to thoroughly understand its work, must comprehend the details, and obtain facts for principles deduced and methods of discipline. To insure this they must visit and inspect the wards, and know the particulars of daily work almost as intimately as the superintendent of the hospital.

The danger is in obtaining only a one-sided view of the relations of the nursing to the hospital. There is an absence of oneness of organization and purpose, a liability to too strong theoretical deductions, and too great an opening for questions of policy and mutual relations. When the training school committee is not composed of persons of rarest temperaments and greatest intelligence, questions of function unavoidably arise; the committee must sustain its prerogatives, and the perils of an involved controversy can only be averted by supreme tact.

The application of this principle is not unlike that of the old and modern methods of asylum management. Formerly all asylums had a medical and business head, both officers of the same board, but not responsible to each other. This arrangement when sagaciously administered with judicious gentlemen as officers worked fairly well. With changes on the board of managers or officers the system almost invariably led to wrangling, and has, I believe, been abandoned, after sad experiences, in nearly every asylum. It has been superseded by the appointment of a medical superintendent, responsible for all departments. The trustees of the hospital are the body ultimately responsible, and being so, whatever system best conduces to oneness of purpose, and is most free from distracting agents, seems best suited to the aims and obligations of a public hospital.

The one object of the hospital is the relief or cure of the patient, and this should never be made subordinate to the training of nurses any more than it should be to the clinical instruction of medical students.

While a hospital may have the most judicious managing board, and the most efficient nursing force, the welfare of the sick in its care and its whole prosperity are largely in the hands of its medical and surgical staff. In order that the staff may accomplish the work it undertakes it must have absolute authority, but only absolute so far as concerns the treatment and care of the patient. The surgeon's orders for the treatment, diet, and management of the patient must be strictly obeyed. The whole strength of the hospi-

tal should be directed to aid his efforts, but the *means* by which the ends are attained should be regulated by the management of the hospital.

I bring this principle forward because the want of it in the celebrated controversy at Guy's Hospital has done infinite harm to the modern system of training schools, and aroused grave doubts in the minds of the medical profession and managing boards as to its practicability. It entangled that hospital in a record as discreditable to its staff and governors as it was pernicious to the sick under its care. The question is not so much of rights as of dangers.

To the staff is given the grave responsibility of the treatment and recovery of the patient. To accomplish this the managers place at its disposal buildings constructed and cared for on correct hygienic principles; wards fitted for the required work with suitable furniture, appliances, and accessories; food, medicine, and instruments; a working force to maintain the running of the institution; a house staff to assist, and a corps of nurses. It is the duty of the executive officer so to regulate these forces as to provide the most efficient means of carrying out the orders of the staff. The existing regulations are made after full advice and concerted action with the staff. These means having been provided and placed at the disposal of the staff no interference should be permitted, but they should be used legitimately. The amputating knife is provided by the trustees, of proper and desired kind, in good condition, subject to the surgeon's call, but if wrongfully used, say against a patient's will, or if it is recklessly or carelessly employed, then the misuse should be called in question. So likewise, the nurse is an instrument to be utilized by the surgeon as a factor in the recovery of his patient, to do his work in *his* way. If, however, she fails in her duty to him it is for the administration to correct, discipline, or remove. The vital point of the disciplinary system to which the nurse is subjected is that she carries out intelligently the doctor's orders. This constitutes the nurse's whole obligation to the medical man. Failing in this the superintendent is answerable to the surgeon for her shortcomings. If instructions are improperly executed or neglected complaints may be made to the person in charge of the nursing force. If general principles are wrong, or being right in theory are neglected in practice, complaints may be made to the executive officer. If he and the staff are in sympathy—and without it nothing goes well—matters are easily set right. The difficulty arises from violation of the principle on which every administrative system is based; that in matters of discipline, such as obedience and behavior, the nurse should be responsible to one head only. The enforcement of this is essential to the due attainment of the very object to which the skill of the staff is directed.

It is a matter of congratulation that both leading hospitals in Boston are pretty thoroughly free from any spirit or action that imputes to them a lack of accord in the above principle. The violation of it, however, has made the relation of the training school to the staff a subject of many a hot and bitter controversy elsewhere.

The scheme of training in this country is so well known to the profession that I need not take your time with a detailed narration, but I desire to call attention to certain general principles. One of the most important is the relation and ratio of theoretical

and practical teaching. The course of study endeavors to teach and perfect the pupil in certain things which by general consent are deemed essential. Illustrative of most elementary duties I might mention the making of beds, giving baths, applications of dressings and bandaging, administering of medicines, prevention of bed-sores, etc. Next might be grouped various duties, for example, leeching, use of female catheter, more complicated dressings, and use of hypodermic syringe. Again, the nurse is taught to observe the more common symptoms of disease, and is instructed how to write a systematic and detailed report of the condition of her patient each day. Further on, she is given the nursing of special cases, surgical, medical, fever, or infectious diseases. She is expected to find out from her manuals and be taught by her superiors something about the special nature of these cases, and the requirements for nursing them. She is taught elementary anatomy, physiology, preparation and digestion of food, ventilation, and proper arrangement of a sick-room. She is taught the relations between doctor, nurse, and patient, what habits to cultivate, and what to avoid. What shall be the exact extent to which a nurse shall be theoretically taught and practically trained in the above examples of the course and the rest of the curriculum, what shall be the correct adjustment between class instruction, private study, and individual work with the patient, is not easy to determine. A nurse is not simply to know *how* to do a thing, she should know *why* it is done, and done in a certain way. A groundwork of thorough teaching, with recitation or "quiz," reinforced by bedside instruction or stated lectures from the staff, followed by oral and written examinations, stimulates a nurse to intelligent action.

It is alleged that by the "new system," so called, nurses are *overtaught*. An investigation of this criticism may, perhaps, lessen its force. So varied are the opinions and peculiarities of practitioners that no universal standard has yet been fixed, nor can it be easily done. In my judgment the criticism does not arise because the nurse is instructed in matters beyond her province, or that any attempt is made to distort the calling of nurse into that of a woman doctor. Does it not frequently originate in the self-complacency of some opinionated or stupid woman, who, holding a nurse's diploma, meddles with the physician's prerogatives, or, through vanity, airs her graces? My anxiety is not that they are *overtaught* but *undertaught*. By this I do not mean that they have an insufficiency of symptomatology, anatomy, or what not, but that the essentials as laid down in the more conservative and elementary manuals are not persistently and at all points thoroughly mastered.

After all it is not easy to say where the line shall be drawn. No one can tell when the nurse may be compelled to act on her own responsibility, or what emergency may arise. The nurse of no training, who has not been taught her proper position, fearing to expose her ignorance, will assume opinions and functions she is utterly unqualified to form or fulfill, and "knows too much." It is the nurse of much training who avoids the great danger of a little knowledge, of knowledge a little beyond what is absolutely required for her duties.

There is great diversity of opinion even in matters that are, by good judges, thought necessary for a well-trained nurse. To illustrate: A prominent organizer

and active spirit in a training school of good repute expressed surprise to me that at the City Hospital the medical formulary of house mixtures was allowed to be in the ward medicine closet. She spoke of it much as the teacher of a young ladies' school would about a naughty French novel in relation to her pupils. She was surprised that the properties of drugs, such as opium, aconite, or symptoms of overdose, were taught to nurses. It is sometimes argued that when the nurse has given the exact dose her duty is done. If ever the day comes when remedies always act as desired, when human fallibility is infallible, such instructions may be out of place. There are few physicians who have not at some time been grateful to a well-trained, intelligent nurse for her prompt, discretionary action. It might as well be argued that properties and doses of drugs should not be taught in schools of pharmacy, because after graduation unscrupulous corner-store druggists prescribe for their customers. It is the use and abuse of gratuitous dosing by pretentious and self-conceited nurses that bring all into question, both good and bad. The nurse who knows physiological properties is none the less valuable; the same system that teaches this also teaches and enjoins upon her to refrain from dosing, but it does fit her to recognize facts that her physician may be glad to know, and cause him to feel grateful for her knowledge.

The use of the hypodermic syringe by the nurse is another instance of the diversity of opinion as to her province. As in the previous cases it is the abuse and not the use that raises the question.

Those having the responsibility of training nurses must utilize the means at command in such a manner as combined experience and meritorious advice demonstrate to be capable of producing the best nurse. The best nurse is not the one who has the most theory, or can make a brilliant show of information of a semi-medical nature, nor is she the best who does her work like an automaton. She is the best who intelligently does those things that contribute most to the patient's relief or recovery, being always loyal to the orders and methods of the attending doctor.

The difficulties always attending a new movement have greatly impaired the results of training schools during their first decade. The material has had much to do with this. At first such pupils were accepted as could be obtained, it being recognized that they were not the most desirable. Many seek training not from love of the work, but purely because a diploma is supposed to guarantee good wages. Another class undertakes the work from a hysterical sentimentality, with no aptness for learning or doing. They have a "mission." Another class regards the service as a condescension. Such women are willing to do anything except the painful, wearisome details, the domestic work which forms no inconsiderable part of a nurse's calling.

Like all new projects improvement comes with a better knowledge of the work. A combination of causes now brings a much better class of women to it. If the time comes when all received are model probationers it may be easier for those having the work in hand to produce the ideal nurse.

Undoubtedly every practitioner has been annoyed, perhaps exasperated, by the disobedience, lack of tact, or other shortcoming of his trained nurse. Unhappily these instances are too true, and it would be a charitable view of the question to accept the situation, not as

the result of any system, but rather as the weak side of human nature, and endeavor to wipe out that which is bad, and show a way to produce the good.

Two years of public or private hospital life cannot remodel a nurse's disposition. Those not familiar with the obstacles cannot appreciate the difficulties encountered in this endeavor. It often happens that a nurse in training, who not only gives excellent satisfaction, but is known to act intelligently, and makes herself very valuable in the hospital, fails of success in private nursing. It is said she does not "get on well" with the family and the cook; is too much given to method, and too little to receiving suggestions; wants too many things to work with, requires too much waiting on, and sundry other criticisms of a like character. I have followed several such cases, and I find that in most of them the complaint is made of recent graduates. Hospital work is unattended by these difficulties; the system itself is such as either make them impossible or smooth the way, and the nurse is restrained from error by the discipline of the institution. In family nursing she meets with new surroundings, a change in everything except a patient to nurse. This same nurse, in time, finds out how to avoid complications, adapt herself to varying conditions, learns policy, and gives excellent satisfaction.

The public, as represented by the families of the patient, are frequently more at fault than the nurse. Most persons deem themselves competent to pronounce verdict on her work and her methods, and she failing to meet their views is adjudged as coming short in her offices. Although the public have a right to judge a nurse, she is often more sinned against than sinning.

On the contrary many hospital nurses who compass their training, receive the requisite experience, and obtain only passable records, subsequently in private nursing give invariable satisfaction to doctor, patient, and the family, and acquire a good name, impossible in the hospital, because brought in strong comparison with those who, as a rule, are superior.

Time will bring a better understanding, with progress in methods, with greater distribution of nurses, each year increasing their experience, and a better appreciation on the part of the public, and, may I add, the medical profession.

Hospitals have been the first to reap the benefits, and they have been many and salutary. Whatever doubt there may be with the public, however unfortunate any physician may have been in an unhappy sequence of different nurses who fail of his commendation, whatever question may arise as to methods or deficiencies in the system, the hospital itself has immeasurably advanced in the care of its patients. The patients receive treatment, care, and kind offices that were impossible formerly, and which may be looked upon as a pledge of better things yet to come. Nothing would more surely prove the efficiency of the present system than the expressions of alarm that would arise if an effort were made to abolish it and return to the old ways.

— Two kilogrammes of No. 3 shot and five or six bullets were administered by an Italian physician (*London Medical Record*, May 15th) in a case of ileus. This, with prolonged insufflation of air by the rectum, effected complete relief of the invagination, and the patient made a good recovery.

SEA-SICKNESS ; ITS TREATMENT BY BROMIDE OF SODIUM.

BY G. L. WALTON, M. D.

THERE seems to be a prevailing impression that bromide of sodium is of value in sea-sickness. The introduction of the bromides for this purpose is not new, but general attention was first called to it when Beard, in 1880, in a popular treatise, took up the subject systematically and showed that it was bromidization which prevented sea-sickness, not the exhibition of moderate doses of the bromides.

So confident was this writer of the value of his discovery, that in the addenda to the fourth edition of the work alluded to appears the following statement: "The great dread of sea-sickness has disappeared at last; only those suffer from it who prefer to do so." The directions given are to commence taking bromide of sodium in doses of thirty grains three times a day, three or four days before sailing, and to increase the dose to sixty or ninety grains three times a day, and to continue at the dose producing marked bromidization (stupor, weakness of the limbs, etc.) until all danger of sea-sickness is over. The theory advanced is the comparatively old and unsatisfactory one, that sea-sickness is due to a series of minute concussions. The effect of these concussions is neutralized by the bromides, the bromide of sodium being preferred partly on account of its large percentage of bromine, and partly on account of its mild action on the stomach, the latter quality being desirable, although the symptoms which are referred to the digestive tract are primarily of cerebral origin.

There is little doubt that sea-sickness is a cerebral trouble (although the concussion theory is hardly tenable, for reasons which will be stated further on), and a medicine which stupefies the cerebral centres will, if used in sufficient doses, prevent it, as will, indeed, the continued inhalation of ether. The question is, however, has the remedy been found which is sufficiently practicable as well as effective to justify its adoption?

The knowledge of the bromide treatment has spread so rapidly that physicians are often consulted as to the advisability of trying it, and it is well to form a definite opinion on the subject. Physicians are already, perhaps, inclined to view this remedy with the opposite of enthusiasm; still, inasmuch as many do so without a definitely grounded opinion, and as others content themselves with telling the patient to try it if he likes, and others fancy that the remedy may be worth the trial, a brief consideration of the subject may not be out of place.

The reasons for discouraging the use of bromide of sodium for sea-sickness are the following: In moderate doses it is valueless, and sometimes causes disagreeable symptoms (depressing headache) which should not be unnecessarily added to the discomforts of the sea-sickness; the efficient dose is too large to be intrusted to the laity, or even prescribed by a physician for a disease of so little danger and short duration.

Bromide in moderate doses (thirty grains or less three times a day) has proved ineffectual so often that the cases in which it seems to have given relief must be looked on with much suspicion. No case has come to the writer's notice in which sufficient ground appeared for crediting its efficacy, while a large number of cases have been reported in which the malady was unaffected by the remedy. This opinion agrees

so completely with that of most physicians who have had opportunity to experiment, that no cases will be cited to illustrate this point, excepting that of the writer himself.

On crossing the Atlantic eastward the weather was comparatively fair, and no sea-sickness was experienced. On the return trip thirty grains of bromide of sodium were taken regularly three times a day, beginning several days before sailing. A depressing headache appeared before going on board, and persisted. As soon as the weather became rough severe sea-sickness came on and lasted, with intermissions, during the voyage. The disgust for the bromide became so great that it was given up after a few days at sea.

On another occasion, as a preparation for crossing the English Channel, fifteen grains each of the bromides of potassium and ammonium were taken three times a day for several days. A similar headache appeared on this occasion, and persisted during the trip, although the water was so smooth that, with the exception of the writer, no passenger complained of the least inconvenience. It was supposed at that time that the headache was due to an idiosyncrasy, but a number of similar cases have since been reported to the writer, including that of a gentleman who, after the use of only twenty-grain doses three times a day, suffered from such severe frontal headache as to be obliged to give up the medicine before sailing, on account of interference with his business.

In regard to the large dose of bromide Beard has said: "For all the members of the human race above the age of twelve or fifteen, it is probably entirely safe to begin with thirty grains of bromide of sodium, and to increase and keep up the action of the remedy until there is a weakness of the limbs, a dullness, a stupor, a tendency to sleep by day and by night, and to fall asleep any time." This plan is neither safe nor easy.

While in Europe the writer was consulted by a gentleman who had taken small doses of bromide on the voyage from America, quite without effect. The question was with regard to the proper dose for the return voyage. The plan of bromidization was explained, though not advised. The gentleman said that he could not at any time judge accurately of his own symptoms, certainly not on shipboard, and still less when under the influence of a drug which was to make him stupid, and inquired what dose might be considered absolutely safe for him. The answer was, thirty grains three times a day. This dose was taken with varying regularity, and naturally without effect.

This case is merely mentioned to illustrate the difficulty, as recognized by an intelligent layman, in judging of one's own symptoms, a difficulty at once enough to prevent placing the remedy in the hands of the laity, even if the treatment proposed were a desirable one. That the large doses may give rise to exceedingly alarming, even if not permanent, effects in a very short time, is illustrated by the following case, which came under the writer's own observation: The case was that of a gentleman who had made some dozen voyages, and had been distressingly sick on all. Having read Beard's treatise, he resolved to give the bromide a thorough trial, and persisted in the use of ninety grains three times a day, because this was the maximum dose mentioned. At the beginning of the voyage he was extremely lively and entertaining, but in a few days he was so weak as to totter about like an old man, and so aphasic as to give up all attempt

at conversation. Much as these symptoms alarmed his wife, he preferred them to sea-sickness, and was only with difficulty induced to reduce the dose. The symptoms lasted through the voyage of fourteen days, and for certainly some weeks after, since which time the writer has heard nothing of him. Whether the immunity from sea-sickness was due in this case to the bromide cannot be with certainty determined, as the water was comparatively smooth, but even if it were, this result would have been no compensation for the anxiety of his friends.

This is of course an extreme case, but the writer has had occasion to assure himself that alarming symptoms have followed the use of much smaller doses, even under medical direction; occurrences which, however rare, are worth considering, since the disease itself is one of so little danger.

Unfortunately there is little to offer in place of the bromide. No other specific seems to have proved satisfactory excepting in fair weather and in the hands of enthusiasts. Nitrite of amyl has had its turn of popularity, but further experiences, as shown by the numerous letters to the *Lancet*, denying its efficacy and calling attention to its dangers, have reduced its use to a minimum. The ice bag has been claimed by Chapman to be a specific, but seems not to attract much notice. The various mechanical precautions, as inspiring and expiring with the motion of the vessel, succumb at the approach of rough weather. Whether the swinging berths will stand the test of experience remains to be seen, but it is to be feared that they will prove little more than palliative.

A little study of the pathology of sea-sickness will show the improbability of medicinal measures short of actual narcosis proving more than palliative at the best, and that one must resign himself to more or less discomfort until the cerebral centres have become accustomed to the new conditions. That sea-sickness is due to a series of concussions is improbable, first, because the symptoms appear not simply when the vessel is being pitched about in a storm, but also when the motion is gentle and regular, provided it is at all extensive. In the latter case there can be no question of concussions, however minute. In the second place, the recovery in the majority of cases after a few days renders the theory of concussions rather improbable, as the conditions for producing the concussions remain the same.

A more plausible supposition seems to be the following: Pressure of the labyrinthine fluid on the nerve terminations in the semicircular canals, when unusual in direction and intensity, produces disagreeable cerebral symptoms, including dizziness, headache, and nausea. The same symptoms may be produced in affections of the auditory apparatus (Menière's disease) not by unusual pressure, but because the abnormal condition of the peripheral nervous apparatus causes an abnormal impression to be transmitted to the brain, even when the pressure of the fluid remains the same; here the symptoms, though not identical with those of sea-sickness, are of the same general nature, and include dizziness (though generally of a peculiar kind), headache, and nausea. The pitching and rolling of the vessel causes the pressure of the labyrinthine fluid to vary in intensity and direction at every point, and the disagreeable symptoms produced will vary with the extent of the motion and the cerebral susceptibility of the individual. The sickness ex-

perienced by certain persons on riding backwards in the cars is only to be explained in this way, as well as that of those extremely susceptible persons who are made sick by riding even forwards for a considerable time. The length of time required to accustom the cerebral centres to the unusual pressures of the fluid varies of course greatly with the individual, and may extend over a whole voyage.

Acceptation of this theory might lead one to try quinia or salicylate of soda, for which such favorable results have been claimed in Menière's disease. As this step is hardly advisable, we are limited to extremely expectant therapeutical measures. The persistent constipation of sea travel may be anticipated by a seidlitz powder or a little Hunyadi water in the morning, unless the bowels are exceptionally free. At the first approach of sickness, or before, if it is anticipated, the patient should lie flat on his back and remain so as long as possible; adding the motion of the body to that of the ship only increases the discomfort, and often brings on nausea which could have been avoided. It is wiser, if at all sick, to take light food in the berth on waking than to try to get to breakfast, and when on deck frequent attempts of this kind, if possible even directly after vomiting, the recumbent position being immediately assumed after eating, are better than one or two attempts at a meal in the saloon. One can reconcile himself the more readily to inactivity when he realizes that in most cases the sickness is only a question of a few days unless the weather grows decidedly rougher. All more active measures are sure to come to grief, and only add to the discomfort of the patient.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, M. D., SECRETARY.

MARCH 5, 1883. DR. BUSH presided.

DR. G. H. M. ROWE read the regular paper on

THE TRAINING OF NURSES.¹

DR. WHITTEMORE said Dr. Rowe has covered the ground of the present system of instruction given to nurses in the different schools in this city so completely that there is but little in addition to be said. Dr. Rowe alludes to the two systems. At the City Hospital the school is under the complete control and management of the hospital. At the Massachusetts General Hospital a separate board of trustees direct the instruction and control of the school, but subject to the regulations of the hospital trustees. The school at the Massachusetts General Hospital was started in 1873, certain wards being given up to their care, the nurses living outside of the hospital. In 1876 they were accommodated with room and board in the hospital, and in 1877 the whole of the hospital nursing was placed under their charge, so satisfactory and so far in advance of previous nursing were the services rendered.

At first there was considerable sentiment in the nursing, but it has mostly disappeared, and nearly all now apparently enter upon the work with the idea of becoming educated nurses, and with the intention of

following it as a life work. Some friction at first existed between the two departments, but it has disappeared, and all work together pleasantly and profitably for both. Family nursing has many requirements distinct from hospital nursing, but the best hospital nurse in most instances will make the best family nurse, as she will possess intelligence, tact, and qualifications, which will enable her to adapt herself more readily to the conditions of the families in which she is placed. But very few of the nurses from the Massachusetts General Hospital have studied medicine as far as is known.

Another point is the treatment of nurses by families. Whenever an opportunity offers I tell them that they go to a family in time of sickness and trouble, not to add to the cares and anxieties, but to alleviate them, and to conform to what is most for the comfort and convenience of the family. Believing, however, that they are educated and trained for their work, and I think that they are above the ordinary domestic and servant, they should receive attention and consideration as far as is practicable in accordance with their qualification, and not be placed on the level of the common servant.

DR. W. L. RICHARDSON agreed with Dr. Rowe that there were many advantages in having the training school under the direct management of the hospital governing board. At the Boston Training School at the Massachusetts General Hospital the dual system had worked admirably; but such a condition could exist only where the officers of both the hospital and the school were able to work together in such a way as to avoid the numerous causes of difficulty which such close relationship was almost sure to bring about. No one who had had any experience with the old and the new system of nursing would wish for a moment to give up the present class of trained nurses.

Unquestionably there were nurses who failed to satisfy the requirements of either the profession or the public, but if employers would return to the Registry for Nurses true statements as regards nurses this difficulty could soon be remedied.

DR. J. G. BLAKE fully indorsed the system in operation at the City Hospital, both in method and results. The care of the sick was systematically and faithfully attended to, and the results were gratifying to the medical attendants. The difference, when contrasted with the old system, was very marked, in the amount, character, and quality of service rendered. Of course it was only the natural result of the long and careful training and teaching which the system insists upon, but it was a blessed thought, this training of intelligent woman as nurses, and it has helped to lighten the work and anxiety which every hospital physician carries with him during his term of service. In private practice the relief is even greater, and particularly to the man of large obstetric practice is it a boon indeed to know that he is not to be called out of bed to pass a catheter or see if the baby's umbilicus is all right. It might be said that the establishment of training schools for nurses had made in many cases the practice of medicine a pleasure and not a labor.

DR. FISHER remarked that he had often wished a training school for attendants on the insane was practicable. Their duties in many respects were the same as those of ordinary nurses, to which were added special functions incident to the care of the insane. The chief difficulty lies with male attendants, who, in his

¹ See page 1 of this number of the JOURNAL.

experience, were seldom willing to devote themselves long to the care of the insane. Four or five months was the average duration of terms of service among male attendants in the Boston Lunatic Hospital and other asylums in the State. This would barely suffice for learning the rudiments of their profession.

The difficulty was much less with female attendants, as they were neater, more teachable, and willing to remain for long periods. They invariably do better work for less wages and for longer terms of service. Dr. Fisher inquired of Dr. Rowe if any training schools for male nurses existed in this country.

Dr. ROWE replied to the question of the feasibility of training schools for male nurses that in his judgment it was possible to accomplish such a measure in a large, well-organized, general hospital.

There would be many complications and embarrassments in such a feature that do not arise in the training of female nurses. The greatest obstacle is the want of suitable material. The calling is not one men naturally seek; too many avenues are open for more lucrative employment in trades and all branches of business. They are, as a rule, accidental causes that bring male nurses to hospital work, or some deficiency that unfits them for those branches of business requiring full physical or mental development. Again, men well fitted for the work are unwilling to deliberately give two years' time to training, and yet more unwilling to look forward to it as a life labor.

Many male nurses, "wardmasters," have, however, after spending two or more years at the City Hospital gone into private nursing and succeeded admirably in the requirements of a male nurse, finding constant employment, and at prices really above what they are worth.

A training school for male nurses in a hospital already having a training school for women would start with many advantages in the project, but it would require a larger number of men in the wards, involving greater expenditure, more room, greater departure from hospital routine, and a duplication of much work, such as recitations, demonstrations, lectures, etc., which already draws heavily on those having the hospital and school in charge. I am not aware of any organized training school for male nurses in civil life, though some of the European countries possess excellent ones in training men for military hospitals and the field. Those trained are enlisted men.

In regard to training schools for attendants in hospitals for insane I consider them practicable, a thing greatly to be desired, and a measure which is sure to come. The introduction into asylums of trained nurses will cause a demand for trained male attendants, and some time I feel sure will be attempted and, if commenced under proper auspices will succeed.

Whatever asylum attempts this work will reap great benefits, but it should only be attempted, and can only succeed, where the management is willing to be liberal in expenditure, during training, and also more willing to establish graded increase of wages to retain men when trained.

Dr. COWLES said he thought the subject had been well discussed in Dr. Rowe's paper, and that little need be added in regard to the advantages of having trained nurses in general hospitals. It having fallen to his lot to have the management of the City Hospital through the transition from the old system with all its defects to the establishment of the new one, it seemed

to him to go without saying that the training school system is not only the better but the easier to manage. Too much emphasis cannot be placed upon the importance of beginning with a proper organization, and one based upon the correct principles for governing such a complicated assemblage of persons as exists in a large hospital. Placing the training school under the control of the superintendent is undoubtedly the best way, as at the City Hospital, but there are few examples of this plan, and when he was engaged in introducing it there he knew of no other such organization. It promotes unity and harmony of management that contribute largely to success. He would not be understood to disparage the great work done by the training-school organizations outside of hospitals, for they were not only the pioneers in the matter, but there were many hospitals, particularly those under non-medical management, which the new system would otherwise be slow to enter. Hospitals with small means of support may receive invaluable aid in this way.

Every general hospital, if not too small to warrant it, should have a medical superintendent, and now that the new system of nursing is so well established as the best it is time to determine the best plan of organization. It has been said that in the earlier plan there are difficulties arising from the necessity of harmonizing two governing boards in the control and management of the nurses. There are, in fact, under that plan three such factors to be harmonized, as the medical staff is an important element in the matter, as all orders concerning the treatment of the sick must emanate from it.

A medical superintendent having a professional understanding of and interest in the work of the staff, and having control of the nursing department, as of all others in the hospital, can best suit the service to the needs of the staff. The superintendent should be held responsible for furnishing suitable nurses as well as other appliances, and the nurse should obey orders of the physician or surgeon unquestioningly. Should any of the staff misuse these aids it is a matter between them and the superintendent or the governors of the hospital. Therefore it is that all discipline of the nurses, even in their ward work, should belong to the superintendent, because their failure is his failure, and because, also, the other conditions of their life and training in the hospital belong to him. This principle is plain and easy to understand, and careful adherence to it makes impossible many troubles that must arise under the two-headed management. Even in so successful a school as the original one at St. Thomas's Hospital he has reason to believe from what he once heard when visiting there, and otherwise, that there is a chronic state of friction in regard to small matters, between the professional and the nursing staff, which a medical superintendent could remove, greatly to the promotion of harmony and relief from the wear and tear that kills the officer of such institutions. Under this principle such troubles as occurred at Guy's Hospital never need to be.

In regard to hospitals for the insane, where the superintendent has medical charge of the sick, the management of the nursing department is simplest and easiest. There is a large field for improvement in nursing in these hospitals, and he believes from his experience at the McLean Asylum that, in regard to men's wards, the greatest benefit is to come from the employment of women as nurses. They should not be young

women, would be better for training as nurses, and should be adequately paid for their services. It is probably the chief defect to-day of the State hospitals that the nursing departments are too small and poorly paid. Female nurses are employed in the infirmary wards for men in some of the British hospitals. In the Mount Hope Retreat at Baltimore every male ward is attended by two Sisters of Charity and only one subordinate man, and there are seven or more of such large wards. The Sisters have a certain advantage, of course, over the ordinary nurse, but the State of Massachusetts would find it profitable in the long run to employ a well-paid, reliable woman in many of the male wards of its hospitals. The extension of the training-school system, or some modification of it, to hospitals for the insane promises great benefit to them.

Dr. CHANNING agreed with the other speakers that the Registry for Nurses was doing a very excellent work. He thought, however, that the prices the nurses charged were too high. Many families of moderate means needed at times the most skilled nursing, but they could hardly afford to pay \$12.00 to \$15.00 per week for many weeks in succession. Very often a trained nurse, in the sense the word is ordinarily used, was not necessary, but simply a woman of good sense and kindly disposition, who had had a moderate experience with sick people. Such a woman could render efficient aid to a family tired out with the care of sick members.

English nurses he had employed had given him the greatest satisfaction, being quiet and unassuming, and very willing to do anything and everything.

Dr. M. H. RICHARDSON reported

AN UNFAVORABLE CASE OF EMPYEMA.

William M., thirty, blacksmith, born in Ireland, entered the Carney Hospital June 14, 1881. Eight months before was admitted to City Hospital with pleurisy on right side. Remained there seven weeks, and was then discharged. Six weeks later was readmitted to the City Hospital, feeling worse than at first. He was aspirated twice, and again discharged with symptoms alleviated.

Present condition: Complaints of dyspnoea, dry, hard cough without expectoration. Loss of appetite, flesh, and strength.

Two weeks after entrance aspirated by Dr. Garland, and thirty-two ounces of pus withdrawn.

July 5th, three weeks after admission, was referred to visiting surgeon, Dr. Richardson. Operation without ether. Patient was seated astride a chair, leaning over its back. The skin over line of incision was first frozen with ether spray. Free incision under carbolic-acid spray made through oedematous tissues of last aspiration in the ninth intercostal space, right side. Four quarts of inodorous pus evacuated. Chest washed out with one to one hundred solution of carbolic acid, and full Lister dressing applied. During the next two weeks dressings were changed daily and chest washed out. Normal resonance present as far as fourth rib in front and back. Normal vesicular murmur as far down as lower angle of scapula behind. Below that point friction sounds. Discharge continued to August 1st, about the same in quantity and somewhat offensive. Lister dressings now omitted and oakum substituted. Average evening temperature during July under Lister, 99.6° F. Average evening temperature during August and after substitution of oakum, 101.6° F. Discharge

of pus continued in varying amounts till April 10, 1882, when he was discharged, improved. During this time he had gained in weight and general appearance. There had been no cough or other pulmonary symptoms. About two months later he came to the Massachusetts General Hospital in a very filthy condition from neglect in dressings. The discharge had almost entirely ceased. He was very much improved in health, and was about to resume his trade. He was dressed with iodoformized cotton batting several times with complete disappearance of all offensive signs.

He died some time in December, but the particulars of his death are unknown. He was very much emaciated. Nothing was noticed in post-mortem examination of the organs. The cavity of the chest was washed out and a plaster cast made by Dr. Mixer. Windows were made in the anterior thoracic wall to show the shape of the cavity, size, etc. It was found that the upper part of the right lung as far down as the fourth rib was normal in appearance, not adherent, and fully expandible by bellows fastened into trachea. There was a strong adhesion to the fourth rib front and back, which effectually shut off the upper from the lower part of the pleural cavity. In the lung above the fourth rib there were numerous hard nodules, which gave rise to the supposition that phthisis was the cause of death.

The cavity itself had a capacity of about a pint, and its shape was well shown by the cast. It extended upwards and backwards, its upper border in contact with lower edge of fourth rib, and its lower having the diaphragm for its base. The incision through the ninth intercostal space gave very fair drainage, though it might have been made in this particular case one space lower without danger of clogging the tube.

The thorax showed also how greatly the right half of the chest had become contracted. The left side seemed thereby much more capacious. The spinal cord had been exposed, showing marked lateral deviation in the thoracic portion as a result of the contraction of the thorax. Dr. Richardson had made a dissection on the healthy side to show the surgical anatomy of the intercostal spaces. The upper branch of the intercostal arteries were shown running in the groove on the under surface of the rib, accompanied by the intercostal nerve, which had been traced back to the spinal cord. It was shown that the inferior branch of this artery is very small, and of no consequence in the operation of tapping or freely opening the pleural sac. The importance of avoiding the upper part of the space was illustrated, and attention called to the very great downward slope of the ribs.

Dr. Richardson quoted Dr. A. T. Cabot, who advises that in this operation the incision be made from before backwards towards the spine, because one's inclination is always to cut too horizontally. If the cut is made from behind forwards, and the middle of the space is lost, your knife comes up against the under border of the rib, and the large intercostal artery and nerve are injured. By cutting in the other direction error in judging the slant of the rib is followed by striking the upper border of the lower rib, and no harm is done. By this procedure, however, it must not be understood that a transverse or diagonal incision is recommended.

Dr. Richardson showed also a thorax in which there had been an empyema of long standing. The thoracic cavity was seen from below. The right lung was nor-

mal, and capable of full distention. The left was compressed upon the dorsal vertebrae to a mass no larger than the hand, totally incapable of expansion. It was firmly attached to the ribs by two strong ribbon-like adhesions, which ran across the pleural cavity at different angles. The patient was about seventy-five years old, and had probably carried the effusion for a long time.

DR. BOWDITCH spoke of the very interesting specimens presented by Dr. Richardson. There were, however, two points in regard to the first one upon which he wished for further information than he could get from the report or from examination of the specimen.

(1.) What proof exists that tubercular phthisis was the cause of death? The *rational symptoms* might have taken place in simple chronic pleurisy. Neither râles heard under the clavicle before death nor the mere feeling of nodules in the long compressed lungs as observed in the specimen were sufficient to decide the question of phthisis. An incision into the few nodules felt in the compressed lung, and a microscopic examination, or the discovery of tuberculous or caseous matter elsewhere, were needed for more exact diagnosis.

(2.) As the patient had much improved at one time after the permanent opening was made, the question arises whether his subsequent ill-health and death were not owing to his own carelessness in reference to the fistulous cavity. If the patient had been placed under a strong tonic general treatment, and a portion of several ribs had been removed, according to the plan now followed in Germany, it is possible a cure might have been effected. Dr. Bowditch suggested these questions not with the intention of criticising the treatment pursued, but solely because as the facts are presented he could not believe it well for him to fail to present to the Society his doubts.

Dr. Bowditch spoke also of the use of ether, and regarded its administration as always fraught with danger in any case where one lung is compressed by pleuritic effusion. He attended one case in which there was a removal of a part (a little more than an inch) of two ribs. Twice the patient came near dying. Regular breathing ceased, and only after the strongest measures of artificial respiration were resorted to was the patient saved.

DR. J. G. BLAKE said that the specimen was very interesting and instructive, because it illustrated several points in the treatment of empyema which were not always sufficiently considered by physicians assuming charge of cases: (1) the best point for the incision; (2) the size of the cavity to be obliterated; (3) the duration of treatment. In relation to the first point he pointed out that unless the permanent opening was at the most dependent point it was impossible to properly drain the cavity, and the result was stagnant pus and septicæmia, with death following as a matter of course. He has seen two fatal cases recently, the result of operations between the fifth and sixth intercostal space in the axillary line. Pus will not run up-hill any more than water, and unless we find the lowest point and treat the pleural cavity as we would any other abscess of large dimensions, keeping it constantly drained and disinfected, we shall have the case prolonged indefinitely, and our patient in more or less danger of unpleasant and dangerous symptoms. If an incision is made high up a counter-opening should be made at the lowest ascertainable point, so as to avoid purulent collections.

Dr. Clifford Allbutt followed this rule in his early cases, and generally with pretty satisfactory results. When we consider the size of the cavity and the fact that a long compressed lung will be very slow in expanding, and also that the process of granulation inside the pleura is not rapid, we have sufficient explanation why some of these cases are so slow to get well. This consideration should also be remembered as an argument for early operation. He can see very little use, after a fair trial of repeated aspirations, in postponing permanent opening.

In cases where the lung is collapsed and carnified, and no expansion possible, he would be inclined to favor excision of portions of one or more ribs, so as to insure perfect drainage and more rapid and complete contraction of the affected side. This operation, although frequently done in Germany, had not to his knowledge been done in any cases in this vicinity.

DR. TARBELL coincided with the views of Dr. Blake that a low opening was to be preferred. The pus in all ordinary positions of the body sinks to the base of the chest, and the purpose of the opening to secure thorough drainage cannot be in any other way secured. He inquired whether any one knew of cases of empyema treated by resection of the ribs. None had come to his knowledge.

In reply to Drs. Blake and Tarbell, DR. RICHARDSON stated that in future operations he should select the eighth intercostal space or higher, because when the extreme lowest point of the thorax is sought, — the wedge-shaped inferior portion, so to speak, — it had been his experience in some cases to have great difficulty in keeping the passage clear. This is evident when it is considered that the cavity is closed in part by arching upwards of the diaphragm and consequent obliteration of the lower part of the sac through which the tube has to pass. As the cavity contracts it has in Dr. Richardson's experience been necessary to lengthen the tube until it had reached four or five inches. In favorable cases, where the cavity is filled by expanded lung, he thought it made very little difference whether the opening be in the eighth, ninth, or tenth spaces, or higher, but in unfavorable cases a tube passed through the ninth or tenth space causes very great annoyance and discomfort as the disease progresses and the cavity becomes gradually closed.

DR. BOWDITCH, answering Dr. Tarbell's question, said he had seen one case in which the ribs were resected at his recommendation. The existing opening was high, and a piece of rib was removed low down the back, thus giving a double opening. The patient improved very much after the operation. This was the only case of which he had personal knowledge, but many similar cases are reported from Europe, and he considered the operation a useful one.

In reply to Dr. Draper's question if a counter-opening could not be made, by which all difficulties would be avoided, Dr. Blake said this method would generally be advisable and successful, and Dr. Richardson thought the results were satisfactory with a single opening and the use of a double-current catheter for washing out the chest.

Adjourned.

— Bartholow's Practice of Medicine is being translated into Chinese for the benefit of the physicians of the celestial empire.

SUFFOLK DISTRICT MEDICAL SOCIETY.¹SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND
HYGIENE.

ALBERT S. BLODGETT, M. D., SECRETARY.

A discussion upon the subject of

DIPHTHERIA

was introduced by DR. C. P. PUTNAM in the following manner:—

"Diphtheria is an acute, contagious, and infectious constitutional disease, in the course of which effusions of fibrine, and cellular changes generally occur either in or on the mucous membranes and the surfaces of wounds. These fibrinous exudations may be called 'false membranes occurring in diphtheria' or 'diphtheritic membranes,' according as they are regarded as essential parts of the disease or accidental accompaniments of it. But no distinction can be drawn between exudation *on the surface* as croupous, and *in the tissue* as diphtheritic, as if they differed in character, and only as a matter of convenience may they be called arbitrarily croupous or diphtheritic according to their position on or in the mucous membrane. When the superficial exudation is detached the mucous membrane is left whole or only denuded of epithelium, but the removal or sloughing of a deep-seated exudation implies removal or ulceration of a part of the mucous membrane.

It has been a mooted point whether, as the question is usually put, 'croup and diphtheria (in the larynx) are the same thing.' Their non-identity has been claimed mainly for the following reasons: Croup or simple membranous laryngitis occurs most frequently in the winter months, diphtheria is fairly distributed through the year. Croup is regarded as a sthenic, diphtheria as an asthenic disease. Contagion is common with diphtheria, and is claimed not to occur with croup. On the other hand it is held that no difference can be discovered between the membrane of a typical case of croup and one of laryngitis of diphtheritic origin; that diphtheria is only more likely to attack the larynx in winter than in summer; that there is less contagion in diphtheritic laryngitis because the stenosis leads to death earlier, and that many cases of light diphtheria show no more asthenic character than cases of so-called croup.

"I do not think the usual way of stating the question presents the best method of solving it, if, indeed, it can be solved at all.

"Idiopathic croup was a common diagnosis not many years ago; now this diagnosis is seldom made. On the other hand we hear of one case after another, that it had been believed to be croup, but was found in course of its development or at the autopsy to be diphtheria. So common is this view getting to be that we may regard it as practically acknowledged that every case of membranous laryngitis is likely to be not idiopathic croup but diphtheritic laryngitis. Many physicians, however, who recognize this general change of view, and believe most cases to be diphtheritic, still maintain that this and that case do not come under the rule, but are true idiopathic croup, and they say with justice that though a thousand cases of croup have been proved to be diphtheritic this fact alone would not prove that the thousand and first must have the same origin. It is fairer to state the question

in this way: Is all false membrane diphtheritic? for then all croup must be diphtheritic; or, Is some membrane non-diphtheritic and simply traumatic? for then though most croup may be diphtheritic some croup may be non-diphtheritic.

"Now false membranes closely resembling diphtheritic exudations are said to have been caused by breathing steam, smoke, ammonia, by the application of corrosive sublimate, arsenic, sulphuric acid, etc. Granting that croup is generally caused by diphtheria, is it possible also that it can be caused by any of the unseen sources of nasal catarrh and bronchitis? At least this has never been disproved.

"*Treatment.* Diphtheria is, in a large proportion of cases, a mild disease, yet at the outset of any attack we know it may, and cannot help fearing that it will, turn out to be one of the most fearful ever met. So we give our medicines and gargles, and when the case comes out well, attribute the success to them. The result is that there is an enormous list of remedies, each one of which is held by its special champion to be nearly a sure cure. Some of these have had their day, and have fallen quite into disuse; others retain a place in the treatment of the disease without being the panaceas they were said to be at first.

"Lactic acid has been much praised for its solvent effect on false membranes, and a writer relying on this has proposed to cure croup by a spray of the acid. But in cases easy to handle I have applied the pure acid and various dilutions of it with great deliberation directly to the membrane without being able to affect it at all unless it be that a superficial part was dissolved, producing an imperceptible change.

"Lime water undoubtedly dissolves false membranes in a test tube, but it has no appreciable effect on membranes in the throat whether in the form of spray or as a gargle.

"The advantage of steam from slaking lime over ordinary steam appears to be purely imaginary.

"Sulphur, as a remedy for diphtheria has passed through many medical journals, which have been freely quoted in the newspapers. Though I have never prescribed it I have several times found my patients using it thoroughly and in spite of much discomfort, but without the least effect.

"Styptic solutions of iron seem to be used very commonly as a local application with the idea of destroying the vitality of the false membrane, and cauterizing the mucous membrane so as to prevent the disease from spreading. I have applied them with great care, but on the following day the patches had enlarged in the ordinary way.

"Pilocarpine is said to effect a removal of the exudation by producing a copious flow of saliva and washing it away, but it certainly has no effect on membranes of any considerable size and thickness unless it may hasten somewhat the natural maceration which leads them at length to be thrown off.

"Compound tincture of benzoin is supposed to prevent the spread of the exudation by mechanically protecting the neighboring mucous membrane, but I have seen the exudation advance over the coated mucous membrane, and apparently nothing has been gained by it.

"Nothing that can be done for a patient with diphtheria is so grateful as applying an ice-bag to the neck. A patient who has found it difficult to drink will often do so with ease after the ice has been on for a while.

¹ Concluded from page 562, vol. cviii.

Swollen glands are often reduced in size, and lose their excessive tenderness, and apparently the swelling is often warded off.

"Agreeable as ice-bags are while the patient is feverish they often become disagreeable when the fever abates, and their influence is decidedly bad when the patient is in a state of depression. On the other hand poultices, the hotter the better, give decided relief to pain arising from swollen glands, and are preferable to the ice when there is little or no fever, or any tendency to depression."

Dr. Putnam also said that he used, as a rule, tr. ferri chl., chlorate of potash, and glycerine, together with local disinfectants, especially when there was membrane in the nasal cavity. He also often gave sulpho-carbolate of soda in as large doses as could be borne without its causing diarrhoea, and apparently with good effect, though it was hard to believe that a real disinfection of the blood could be accomplished by it.

In addition to the matter contained in his paper Dr. Putnam added that he has employed carbolic acid and permanganate of potassium, applied directly to the parts by means of a brush, but has been unable to discern any effect other than keeping the parts clean. The carbolized nasal douche is an excellent means of reaching the nasal mucous membrane when this is the seat of diphtheritic exudation, and can be treated locally in no other way. A part of the carbolized water is swallowed, a part is expelled from the mouth, and a portion flows out through the opposite nostril. The douche has the disadvantage that it is sometimes the cause of acute inflammation of the middle ear from the passage of fluid through the Eustachian tube.

The compound tincture of benzoin has been also applied to the patches and the surrounding mucous membrane, but the exudation remains entirely unaffected by the treatment, and extends over the surface protected by the application as it would do if nothing at all had been done.

Salicylic acid has been vaunted as a positive cure for diphtheria, and is no doubt extensively prescribed in its treatment, but its employment is entirely without effect upon the course, duration, or results of the disease. Sulpho-carbolate of sodium, a quackish-sounding drug, which has been recommended by so good a man as Sansom, has seemed to be of some use. At least, cases in which it has been employed have recovered while others in which it was not prescribed have died. Dr. Putnam now uses it in diphtheria, though it is not easy to say how so small a quantity can produce any very marked result.

DR. J. COLLINS WARREN called attention to the impossibility of a differential diagnosis between croup and diphtheria. The duality of the two diseases has been and is still maintained by many observers, but there is really no distinction between them clinically or pathologically. Dr. Warren has never seen a typical case of croup as described in text-books. False membrane is often expelled from the larynx and air-passages, but this does not constitute croup. Often the more severe cases are those in which there is the least false membrane, and in certain cases no membrane is ever seen.

In severe cases the question of surgical interference in opening the trachea is always liable to arise. There is often great difficulty in deciding whether the operation must be instantly performed or if a longer delay may be justifiable. In a former discussion upon this point Dr. Warren expressed himself as inclined to de-

lay the operation unless there is actual stenosis, when it becomes imperative that the operation be immediately done. In intermittent spasmodic stenosis, even with some degree of dyspnoea, the operation may be still delayed, but if any doubt arise as to the safety of further waiting it is better to open the trachea at once.

Tracheotomy has been often discussed here, but one point is of especial and increasing interest. *The operation is becoming less and less impeded by hæmorrhage.* In one recent case only a few drops of blood were lost. If the incision be carefully located in the median line, and the dissection be carried on slowly, the operation may be absolutely bloodless.

The blood-vessels, even if engorged, lie on either side of the median line, and the operation may be performed with sufficient deliberation to avoid them. It is better to *scrape* or to tear through the fascia and other tissues, rather than to cut them. Attention should be given to the degree of dyspnoea actually present in the case. The hissing respiration alone is not a sufficient indication. The entire thorax should be bared and the chest wall examined. If any considerable degree of actual dyspnoea be present the respiratory movements will be labored, and there will be a depression on each side above the clavicle. A depression at the epigastrium is a much more valuable indication of a dangerous obstruction to respiration, and should lead the surgeon to operate at once.

The prognosis in tracheotomy depends to a certain extent upon the degree of rapidity with which the dyspnoea has been developed. A rapid and increasing dyspnoea is a fatal sign, and tracheotomy usually affords but slight relief. A case recently entered the Massachusetts General Hospital in which a sudden development of dyspnoea was relieved by operation, and was followed by a slow recovery.

The mortality in young children after this operation is very great. The youngest child upon whom Dr. Warren has performed tracheotomy successfully was less than two years of age. In this case erysipelas appeared soon after the operation, but strangely enough the child made a satisfactory though slow recovery. This case is an exceptional one, and does not change the thoroughly established opinion that the prognosis is unfavorable in tracheotomy in patients of less than four years old.

DR. H. S. SOULE, of Winthrop, said that he came to this meeting to obtain a definite idea as to what constitutes diphtheria. In Winthrop the local Board of Health is adverse to the existence of this disease, and visits those sick with it and declares that it is not diphtheria. An acknowledgment that diphtheria existed in the town might interfere with the prospective financial harvest of the landlords, and therefore every effort is made to evade a diagnosis of diphtheria. Collisions between health officers and physicians have been frequent, and a misapprehension of the functions of each is the result. Often the patient with a very sore throat is visited in the evening by the physician and the next morning by the undertaker. Something more than a simple sore throat is present in these cases. Cases are reported as "diphtheritic sore throat" which are undoubtedly diphtheria. The following may serve as illustrations: A patient who is a member of a large family had a sore throat, with exudation, chills, fever, prostration, and all the signs of a serious disease. Succeeding this case five children were attacked with similar symptoms, and presented exuda-

tions in the fauces and roof of the mouth. The eldest has since been paralyzed. The youngest succumbed to croup on the sixth day of the disease. The third patient had a mild attack, and was well in a few days. A sister was then attacked and was paralyzed, and the remaining child was only lightly affected, and made a speedy recovery. The question seems to be, Where shall we draw the line so as not to quarrel with the Board of Health? That there is a great difference between diphtheria and tonsillitis no physician will deny. If there is a patch of exudation it should be considered a case of diphtheria. Even if the patient is entirely well in a week the diagnosis is not affected; it has simply been a mild form of the disease.

The State demands that diphtheria should be reported as well as scarlet fever, typhoid, and small-pox. No doubt cases are often reported as diphtheritic sore throat which are indisputably cases of diphtheria.

DR. PUTNAM remarked that no doubt many cases of diphtheria are seen by physicians which are *not* reported as such. Many cases commence in the form of tonsillitis and never become anything more serious, while frequently cases of tonsillitis suddenly develop into well-marked and virulent diphtheria, and speedily terminate in death. The distinction is an imperfect and entirely arbitrary one. . . .

DR. HAVEN asked if the constitutional symptoms may not often be fully as grave in tonsillitis as in diphtheria?

DR. PUTNAM replied that cases are frequently seen in which the exudation is very thin, and which do not extend to other members of the family, do not present the symptoms of extreme prostration, but yet turn out to be diphtheria. Such cases are very puzzling, as the following clinical record illustrates: A married lady was seized with a moderately severe sore throat, and presented a small thin film upon one tonsil, which, however, had disappeared before the next day. Four weeks afterward her child had diphtheria and died of croup. The mother was then attacked for the second time, and had large thick patches in the throat which were unmistakably diphtheritic. The solution to this confusing history was obtained later, when it was learned that a child-nurse had come to the family four weeks before the child was attacked. Two servants who had slept in the same room with her were seized with severe sore throat, as was also the governess, but they were not seen by the physician. The Board of Health was requested to examine the premises, and in performing this duty the nurse was recognized as a former acquaintance in another house in which diphtheria had occurred. It was found that the nurse had come to this family directly from the infected household, and brought with her a bundle containing wearing apparel, which she proceeded to rip and repair partly in the servants' sleeping-room and partly in the nursery. It is probable that the nurse was in this case the means of conveying diphtheria from an infected family to a healthy one, by which the disease was communicated to five persons, with the loss of one life. The first case was not reported as diphtheria, but in the light of the subsequent investigations it certainly now seems to have been so.

DR. LYMAN considered Dr. Putnam's paper a valuable contribution. The question of diagnosis is a puzzle to all. In many cases there is absolutely no way of deciding. He has often seen cases in which a thin, delicate membrane extended over large portions of

the throat, in which the constitutional symptoms were not very severe. Sometimes in cases in which the exudation is very limited the general symptoms are more alarming than in those which present a large surface of diphtheritic exudation. Dr. Lyman remarked that he had little confidence in any form of treatment except that by carbolic steam, stimulants, ice-bags, and nourishment. Remedies are almost powerless as specifics. Painting the throat with the tincture of chloride of iron is often beneficial, as is also the internal use of the same substance. Often it is impossible to arrive at a satisfactory diagnosis, especially when the cases are not severe enough to be called diphtheria. Cases of sore throat accompanied by headache, chills, fever, etc., but in which no membrane is visible, are more frequently *not* diphtheritic, while in true diphtheria the false membrane is always visible.

DR. PUTNAM observed that the membrane is often present in the throat during the earliest stages of the disease, but in certain cases the exudation appears only at a later period. Occasionally diphtheria commences as a follicular tonsillitis, and not infrequently as a red tonsillitis, and it is manifestly impossible to predict what the condition may be a few hours hence. In these apparently innocent cases the membrane often extends from the tonsil to other parts of the throat, and frequently results fatally.

DR. FITZ said that the examination of the false membrane often reveals only mucus and epithelium. The study of the exudation affords no valuable results except in relation to the subjacent tissues. Much more light may be thrown upon the case by examination of the urine. If albuminuria be present the case must be regarded as a grave one. Every case should be looked upon with suspicion for at least twenty-four hours. Even when the patches of exudation are extending there may be no albumen in the urine. Cases in which no patches of exudation are visible, but in which the mucous membrane is swollen, may be accompanied by albuminuria, and subsequently present the paralysis so often observed after diphtheria. Dr. Fitz said that he differed from Dr. Putnam in regard to the identity of croup and diphtheria. There are many histological and anatomical differences between the membrane which is found in croup and that in diphtheria. The relation of the membrane to surrounding and underlying structures is also strikingly different in the two diseases. Certain cases of obstructive laryngitis are observed in which there is no false membrane, while in some cases there are double membranes in the bronchial tubes and trachea, but none in the pharynx or larynx. The best treatment consists in the application of glycerine and thymol. The mucous membrane sloughs off, leaving an open ulcer, which usually heals very slowly.

DR. LYMAN referred to the necessity in the diagnosis of a recognition of the exact pathological relation of the exudation to the subjacent mucous membrane.

DR. FITZ replied that in diphtheria the exudation is *in the substance* of the mucous membrane, which becomes necrosed and sloughs, and is entirely distinct from the exudation of croup, which is deposited *upon* the mucous membrane, but has no organic connection with it.

DR. PUTNAM stated that the distinction between croup and diphtheria based on the position of the membrane mentioned by Dr. Fitz does not hold clinically. Cases in which the exudation in the throat is

so superficial that it quickly melts off and leaves a healthy mucous membrane are sometimes followed by paralysis. The membrane is not distinctive of either disease anatomically or histologically. The thinnest exudations are often followed by paralysis. There is absolutely no difference in the membranes except in position and degree, and only as a matter of convenience may the superficial be called croupous and the deep diphtheritic.

DR. FITZ remarked that fibrinous exudations are not all alike. A fibrinous pleuritic exudation is not indicative of diphtheria.

DR. KNIGHT asked how far it is necessary to regard the local manifestations in the throat as foci of infection for the patient himself, and how long may infection remain active in clothes, dwellings, etc.

DR. FITZ replied that local points in the throat are considered sources of infection to the individual. A thorough fumigation and ventilation for a few days are generally thought to be sufficient to render dwellings, furniture, etc., safe, as far as infection is concerned.

DR. HARLOW asked how the exudation of diphtheria may be recognized.

DR. PUTNAM replied that if the membrane disappears in a few hours it is probably not diphtheria, while if it remains for some days it is certainly diphtheria.

DR. DEBLOIS exhibited a series of

INSUFFLATORS

for the treatment of diseases of the throat and posterior nares, which possess the great advantage of being easily manipulated by one hand. The compression of a small rubber bulb projects the medicinal substance in the form of a fine powder forcibly in any desired portion of the nasal or pharyngeal cavity. The instruments are simply and durably made, and can be employed for many other purposes besides those for which they were originally intended.

Adjourned at 10.15 o'clock.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDÉ, M. D., RECORDER.

DR. ESKRIDGE reported a case of

EXTREME MITRAL STENOSIS, DEATH RESULTING IN A FEW MONTHS FROM SEQUENTIAL LESIONS WITHOUT GENERAL DROPSY.

Charlie, aged fifteen years, died in St. Mary's Hospital during the latter part of December, 1882. In February of that year, during Dr. Eskridge's term of service, he first came to the hospital, suffering from acute bronchitis. The attack ran its course in a week or two, but the heart, during and after the seizure, was exceedingly irritable, frequently beating from 120 to 150 times per minute. Infrequently he complained of pain over the præcordial region. The heart was repeatedly and carefully examined, but no endocardial murmur or pericardial friction sound was heard. No thrill or friction fremitus was felt. He was kept in the recumbent posture, and counter-irritants were applied to the præcordium. At the end of about two weeks he left the hospital, feeling tolerably well, although the cardiac pulsations were rarely below 100 per minute, and a little exercise, or excitement of any kind, would increase them to 120 or more.

In August, 1882, he reëntered the hospital, and was again suffering from acute bronchitis, with free secretion, attended by numerous subcrepitant and large moist, bronchial râles. After the subsidence of the attack, which took place in about a week, a decidedly rough and rather long presystolic murmur was heard. During the remainder of his life he stayed in the hospital, and was engaged most of the time in waiting upon the sick in the ward. Ascending and descending stairs, and active exercise of any kind, greatly exhausted him, causing the heart to beat tumultuously and him to pant for breath. He rapidly grew worse, and by the latter part of November he was spitting quantities of blood rather frequently. The lungs soon became so engorged that the frequent hæmoptysis did not relieve them. During most of December he remained in bed, propped up by pillows. The last two weeks of his life he was air-hungry, and gasped for breath. His extremities were cool and cyanosed, his face was of a dusky hue, and he expectorated large quantities of blood and frothy mucus. No general dropsy existed. Considerable albumen was found in the urine. Physical signs of pulmonary congestion and œdema, bronchitis, pleurisy with effusion, pleuro-pericarditis, and pericarditis with effusion in the pericardium, were present during the last few weeks of his life.

Sectio Cadaveris. Numerous recent and old pleuritic adhesions were found, especially in the neighborhood of the heart. Pleuræ were slightly adherent to the upper portion of the pericardium by means of recent exudate. Considerable fluid containing only a trace of lymph and no pus was seen in the pleural sacs. The pericardium contained several ounces of nearly clear serum. Several patches of recently exuded lymph was present on the outer surfaces of the ventricles. The weight and size of the heart were greatly increased. The right cavities of the heart were relaxed and filled with dark fluid blood and a chicken-fat clot. The left side of the heart was less relaxed, and contained a smaller quantity of blood. The wall of the right ventricle is nearly twice its usual thickness; its cavity is slightly enlarged. The right auricle is dilated. The valvular curtains at the pulmonary orifice appear competent, and show no inflammatory deposits. Tricuspid valve slightly incompetent; otherwise normal. The left auricle with its appendix is enormously dilated. The left ventricle is concentrically hypertrophied. The aortic valve curtains are somewhat thickened, but they are competent, and do not encroach upon the orifice. The mitral curtains are adherent to each other along their entire right borders and along the external portion of their left free margins, thus leaving a space only four millimetres long by two wide for the blood to pass through. The valve has a leathery feel, but neither it nor the surface of the auricle is rough. The mitral valve does not present the funnel-shaped appearance usually seen in such cases, because, probably, the curtains had adhered to each other irregularly, and left the small opening to one side of the centre of the normal orifice. The lungs were dark, deeply congested, and more or less œdematous. Several ounces of clear serum was found in the peritoneal cavity. Liver, spleen, and kidneys dark and congested.

One point in the clinical history of this case is worthy of special attention: The first symptoms directing attention to cardiac disease were the rapid pulse and exceedingly irritable condition of the heart.

These symptoms existed for several weeks, and probably for a few months, before a murmur was audible. An explanation of these, without the presence of a murmur, will be found by a careful study of the diseased mitral valve before us. Neither the valve nor the surface of the auricle is roughened consequently, for the production of a presystolic murmur under such conditions it is necessary for the blood current to meet with sufficient resistance in its passage from the auricle into the ventricle to enable it to set up decided vibration in the valve itself. Before sufficient mechanical obstruction took place at this orifice, the parts being comparatively smooth, to develop a murmur inflammation and beginning adhesions of the curtains to each other were taking place. The latter conditions, although not sufficient to give rise to a murmur, rendered the heart irritable. If the explanation given is the correct one it points to the significance of some irritable hearts where no murmur is present to announce cardiac valvular disease. The length of the murmur was greater than that of any mitral presystolic murmur that he had heard before. It seemed to be divided into two parts, both occurring between the diastole and systole of the heart. The first part was the softer and had less intensity; the latter was very rough and ended abruptly. They corresponded to what Hayden has described as the post-diastolic and presystolic murmurs. He says they always denote great obstruction at the auriculo-ventricular orifice. The post-diastolic murmur, he thinks, is due to the passive flow of blood from the auricle into the ventricle, the presystolic taking place when the auricle contracts. If subsequent autopsies should almost constantly associate the prolonged or double presystolic murmur with great stenosis at the mitral orifice it will be of value in prognosis, as life cannot long continue when stenosis is as great as seen in the heart exhibited to-night.

DR. F. P. HENRY exhibited a specimen of

INTRA-THORACIC ANEURISM,

markedly sacculated, and involving the arch and descending portion of the aorta as far downward as the lower border of the sixth rib. The following notes were taken by Dr. Howard Kelly, the then resident physician, soon after the patient's admission to the Episcopal Hospital.

December 7, 1882. There is a "distinctly elevated area about two inches in diameter to left of manubrium, occupying the first and second intercostal spaces and projecting the cartilage of the second rib. This is also the seat of greatest dullness and of strong bruit and expansile movement. Murmurs heard at apex, ensiform cartilage, and second right costal cartilage. . . . Aortic sounds weak and muffled. Pulse in right radial and axillary strong. In left radial and axillary weak and distinctly delayed. Brachials at elbow visible, sinuous, and atheromatous. Faint bruit in left axillary; none in right. Strong bruit in left carotid, faint in right. Some relation between subclavian arteries. Faint bruit in abdominal aorta. Left pupil always smaller than right."

Under the use of large doses of potassium iodide there was a decided subsidence of the external tumors; also of the pulsation and bruit. The most troublesome symptom, dyspnoea, was not, however, materially benefited.

Death occurred on May 13th, through rupture into the right bronchus, and was immediate.

The removal of the aneurism was rendered difficult by the adhesions to neighboring tissues, especially to the sternum and ribs in front. The fifth and sixth dorsal vertebræ were deeply eroded, and at the site of these erosions the aneurismal wall was entirely gone, its place being supplied by two masses of fibrine accurately fitting into the erosions, but unconnected organically with the sac. They merely acted as plugs. The heart was in an advanced state of fatty degeneration, and slightly enlarged. The aortic valves were perfectly healthy, but immediately above them were marked atheromatous changes. The opening into the right bronchus was about the size of a three-cent piece.

DR. HENRY also presented specimens from a case of

ACUTE PHOSPHORUS POISONING,

consisting of stomach, liver, kidneys, heart and spleen. The phosphorus was taken with suicidal intent during the night of May 7th, and was obtained by soaking the heads of a box of matches in water. Fifteen minutes after swallowing the solution the patient, a male German aged twenty-two, experienced a burning sensation in the stomach, which in the course of a few hours (about six) steadily increased until the pain became excruciating. Copious and repeated attacks of vomiting then ensued, and followed every attempt to allay thirst, which was excessive. On the 8th there was a very loose discharge from the bowels. The patient was admitted to the hospital on the 10th. His skin was sallow and dark, but not then icteric in hue. There was tenderness over the liver, and the line of liver dullness was slightly increased. Severe pain in the abdomen was complained of, and this pain had continued with occasional intermissions since the 8th. The pulse was full and strong, 84 per minute. The temperature was 100° F. The urine contained considerable albumen, but no casts nor other abnormal ingredient. I extract the following from notes taken by the resident physician, Dr. James S. Carpenter:—

May 11th. No pain. Pulse 100; temperature 98.6° F. Patient refuses food, but craves acid drinks.

May 12th. Vomited once, but phosphorus not tasted by the patient as heretofore. Pulse 108 and weak. Temperature, which was 101° F. on the evening of the 11th, now 98.6 F. Decided icterus. Thirst continues.

May 13th. Jaundice increased. Tongue dry and brown, red at edges. Abdominal wall covered with numerous petechial spots. Pulse 126; temperature 100° F.

May 4th. Intense jaundice. One clay-colored stool. Pulse very weak, 32; temperature 98.5. Extremities cold. Bladder relieved by catheter, forty-eight ounces removed. The urine contained bile pigment in large amount, and had a strong odor of phosphorus. The man died at 10.40 A. M., one week, less fourteen hours, after taking the poison. As the patient was not admitted until the third day after he had swallowed the phosphorus the treatment was directed toward relieving pain and sustaining the strength as far as possible.

At the autopsy, which was made very soon after death, the stomach was found filled with a grumous, bloody fluid, but the gastric mucous membrane was quite pale and free from erosion or any sign of inflammation. The folds of mucous membrane upon its

surface were, however, unusually prominent. The liver weighed three pounds fourteen ounces. The anterior border of right lobe and the parts adjacent to the gall-bladder were yellow mottled. Streaks of this yellow coloration extended along the borders of the fissures on the under surface; in parts these streaks were an inch in width. The bulk of the liver was normal in appearance. The gall-bladder was empty. Heart rigid in systole; its valves healthy; slight pericardial effusions.

Lungs: Some old pleuritic adhesions and emphysematous vesicles at both apices.

Spleen and kidneys apparently healthy.

Blood fluid. A microscopical examination of the liver will be made and reported upon at a future meeting.

(To be continued.)

New Instruments.

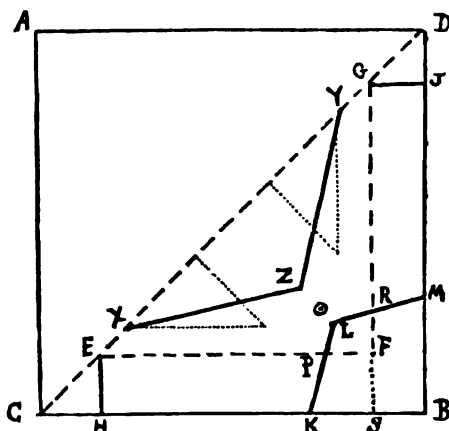
A HANDY INTERNAL ANGULAR SPLINT.

THE multiplication of surgical appliances, so much in vogue, seems undesirable unless some real gain be thereby attained; but any method which enables the surgeon with a few ordinary ever handy articles to easily manufacture splints in every way equal to the expensive apparatus now necessary in the treatment of fractures should be welcome to the profession. A country practitioner cannot fail to find such of service, while in out-patient hospital service and work among the poorer classes all such devices are invaluable. The need for a cheap and easily-manufactured internal angular splint has long been recognized, and I therefore hasten to describe one which it will take one provided with sheet tin, shears, and rivets, but a few minutes to make. It is a device of Mr. F. R. Troop, a ward-master in the accident room of the Boston City Hospital, though it has been modified somewhat by suggestions of the house surgeons.

A square sheet of tin, A B C D, is taken, whose side is equal to the length from the bend of the elbow to the wrist, or as far as the internal angular is expected to reach. This is folded into a triangle B C D. The next step is the drawing of the lines E F and F G parallel to the sides of the main triangle, and at a distance of one or two inches from the edge, according to the width of splint desired. The corners, C E H and D G J, are then cut off to allow later of the turning down of the sides, and a quadrilateral space, B K L M, is removed, thereby cutting away the corner which would fit into the bend of the elbow, where pressure is undesirable. If the sheet be now placed in a vice along the lines E P and G R successively, the sides E K H P and G M R J, and the corresponding plates on the other side can be turned down through 90° F. so as to form the moulds for the upper and fore-arm. What remains to be done is the rounding of the corners, the removal of a portion of X Y G, to render the splint less unwieldy, and the securing of the pieces together by one or more rivets at the point indicated or elsewhere. After covering the edges with adhesive plaster, and padding with sheet wadding, the splint is ready for use.

The splint will retain the arm firmly at a right angle, but with effort allows a slight inward and outward motion of the fore-arm, from slight torsion at the corner of the splint. To remedy this, methods will readily suggest themselves to the maker: by incorporating

extra thickness of sheet tin on either side of the buttress, or by cutting the portion at X Y G, so as to ad-



mit of the reënforcement of the corner by turning down, rather than removing, the superfluous portion, as indicated by removal of parts included in the dotted lines.

By varying the length of the sides of the triangle any shape can be made and any arm fitted, while by having the angle B acute or obtuse, the splint can be made at any angle of inclination, and will then doubtless be found as useful in affections and injuries about the knee as well as elbow joint.

The aim in the preparation of this splint has been to provide one applicable to all cases, and it was with a view to providing for fractures just above the condyles that the angle F was removed. In dislocations, injuries to the internal or external condyles, or fractures of the shaft, there is no indication for the removal of this point of pressure. For such cases the corner can be made square, little or nothing removed, and thus the strength of the splint be materially increased. The tin is then cut along the dotted line S F, and the upper portion bent upon itself to a right angle, so as to overlap the lower coapting surface and be riveted to it. Those interesting themselves in making the appliance will find that by a separation of the overlapping parts in the centre the corner may be made to assume a curved shape, more suited to fit closely to the inner side of the elbow. With this there is also no possible chance of the splint's working down on the fore-arm, and so causing displacement, as sometimes happens with most other forms of internal angular splints.

JOHN TRUMBULL, M. D.

Recent Literature.

First Annual Report of the Provincial Board of Health of Ontario. 1882.

The provincial government of Ontario, recognizing the need of sanitary supervision, have organized a Board of Health, which has during the past year begun its duties, and issued its First Annual Report. The topics presented are as follows:—

Chapter I., Organization of the Board.

Chapter II., Collection of Sanitary Information.

Chapter III., Dissemination of Sanitary Information.

Chapter IV., Investigations into the Causes of, and Remedies for, Various Outbreaks of Disease.

Chapter V., Action taken in Cases of Various Reported Nuisances and Unsanitary Conditions.

Chapter VI., Collection of Statistics of Prevalent Diseases.

Chapter VII., Relations of the Board to Various Classes.

Chapter VIII., Work to be Done.

Soon after its organization a commission of the Board visited several of the State and City Boards of Health of the United States for the purpose of observing their modes of operation, and the result of their observations is reported in Appendix B.

The propriety of occupying a considerable portion of a public document with an advertisement of a private vaccine farm, whose operations have already been the subject of sanitary criticism, is at least questionable. Had the Ontario Board visited the State Board of Connecticut, or at least perused its Fourth Annual Report, the advertisement would doubtless have been omitted, or at least modified in its expressions of approval.

Allen's Human Anatomy. Section IV. Arteries, Veins, and Lymphatics. Philadelphia: Henry C. Lea's Son & Co. 1883.

Prof. Harrison Allen begins this section of his great work with some general considerations on the blood-vessels. Instructive and judicious as they are, we nevertheless are inclined to criticise some points. We had thought that Suquet's *circulation derivative*, which he accepts, had literally been found wanting, and we regret that he recognizes only one kind of erectile tissue. We believe that the form of cavernous tissue which Henle calls the compressible should be distinguished from the erectile proper. We are glad to meet with Mr. Nunn's plan of arterial distribution on the limbs.

There is no need of much comment on the account of the heart, which is given first in general and then in detail. We are disposed to question the statement that both ventricles consist of a cavity and a conus. There is a long extract from Pettigrew's interesting researches on the arrangement of the muscular fibres of the heart. There is a very satisfactory section on the anomalies of the heart and those of the development of the great arteries.

One point in the treatment of the heart seems to us very wrong, and is, we imagine, the result of one of those careless oversights it is so much easier to point out in the works of others than to avoid ourselves. We read on page 343: "The plane of the aortic orifice looks downward, forward, and toward the left. The plane of the pulmonary orifice looks downward, backward, and toward the left." At this point a foot-note refers to Mr. John Wood's well-known paper in the third volume of the *Journal of Anatomy and Physiology*. Feeling surprised at this, we referred to the paper in question and found that Mr. Wood speaks of the "plane of the aortic opening having an inclination downwards, slightly forwards, and towards the right side, and the pulmonary downwards, backwards, and towards the left," which is a very different story. Apart from any other discrepancy, it seems to us that a plane having length and breadth but no depth must be held to "look" in a direction perpendicular to its surface.

The descriptions of the arteries are accompanied by

many physiological and surgical digressions that we think will be interesting to the practitioner. Particular attention is given to the important point of collateral circulation. The external carotid is divided into a superficial and a deep portion, the latter being within the parotid gland, but the point of entrance (on the inner, not the lower, side of the gland) is not mentioned, and the internal maxillary is said to arise behind the gland, which is incorrect. The difficult subject of the cerebral arteries is very well handled, and there is a very instructive diagram of the relations of the posterior communicating artery, but we are sorry to find no mention of the anomalies of the circle of Willis. The persistence of the omphalo mesenteric artery is given as a possible cause of constriction of the intestines.

The veins usually receive but little attention both from teachers and students, and yet in some respects they are better worth knowing than the arteries. They have been treated according to their importance by Dr. Allen, and we have therefore more than ordinary satisfaction in welcoming this part of his work. He dwells on the interesting fact that the facial vein is not formed by venules but by a series of communications with other veins, and that the blood from the deeper part of the face tends to the orbit. This at once furnishes an explanation of at least one reason of the greater danger of carbuncle of the upper lip than of the lower. The development of the veins also is discussed.

Next in order are the lymphatics, and then the spleen and other ductless glands. We regret that the description of the minute structure of the latter organs is not as complete as might be expected in a work of this kind. To conclude, the part before us presents great merits, but, it seems to us, more defects than its predecessors.

T. D.

Student's Guide to Diseases of the Eye. By EDWARD NETTLESHIP, F. R. C. S., etc., etc. Second American from the second revised and enlarged English edition, with a chapter on Examination for Color Perception, by WILLIAM THOMSON, M. D., etc. Philadelphia: Henry C. Lea's Son & Co. 1883. 416 pages.

It is not very long since we had occasion to notice favorably the first edition of this book. The present edition has been carefully revised by the author, some passages struck out, and others added, the net result being an increase in size, and a general improvement. The chapter on symptoms, which opened the former edition, has been replaced by one on Optical Outlines, and the "functional" disorders of sight have been brought together in a separate chapter. In the American edition there has been interpolated a chapter by Dr. Thomson describing the method of testing railroad employees for vision, color-blindness, and hearing devised by him, and in use on the Pennsylvania railroad. It is an excellent manual.

— Are French flats healthy? Yes, very. Are the people in them healthy? No. Why? They have to starve and go half naked to pay the rent. Why are these flats called French flats? To distinguish them from American flats. What are American flats? The people who live in French flats. — *Life*.

Medical and Surgical Journal.

THURSDAY, JULY 5, 1883.

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SOME MEDICAL ASPECTS OF THE TIME OF THE STUARTS.

It is not without both interest and instruction to medical men of the present day to learn of the state of their art as exemplified in the practice of two or three centuries ago. Fortunately the social and political prominence of a few of the men of those days, with something which at the present time would perhaps be called toadyism, has secured to us medical information which otherwise we should never have gained.

Dr. R. L. Macdonnell, in a paper read last fall before the Athenæum Club, has collected some of these facts, which at once illustrate the medical practice of the time, and convey an agreeable savor of professional gossip. The address is published in the *Canada Medical and Surgical Journal* for May and June.

Among the physicians of James I. was Sir Theodore de Mayerne, who played a prominent part in the medical world of his day, being physician, besides, to Henry IV. of France, and both the Charleses of England. The world owes to this man (whether it be matter for gratitude or reproach) the introduction of calomel into medical practice, and into the Pharmacopœia, of the first issue of which, by the way, he was the compiler in 1618. His foreign birth, his knowledge of new subjects, especially of chemistry, in which he was really an expert, and perhaps more than all, his *success*, made him an object of dislike to many of his contemporaries. One of them, for instance, complains that Mayerne gave advice to a certain patient "without consulting the will and pleasure of God Almighty, an arrogance unheard of, and savoring more of the atheist (as too many of 'em are) than a pious physician." He accuses him, too, of prescribing a nostrum, "the great empirical medicine, from which his father, Turquetus (usually by the French nicknamed the Turk), had got great reputation by selling it publicly on the stage, whom Sir Theodore, in his younger days, had attended in that employ." John Chamberlen, writing to Sir Dudley Carleton, August 11, 1612, mentions Mayerne's appointment as having given dissatisfaction. "Much envy was caused by Turquet's (Mayerne's) preferment, who hath £400 pension of the king, £400 of the queen, with a house provided him, and many other commodities which he reckons at £1400 a year."

Sir Theodore, for the benefit of posterity, left, besides many published volumes on subjects connected

with the prevalent dispute about chemical remedies, nineteen manuscript volumes, folio and quarto, of records of cases, exclusive of a volume relating entirely to the health and habits of James I. His *clientèle* comprised many of the distinguished people of the time. The later volumes, entitled *Ephemerides Anglicæ*, relate to the disorders and cures of persons of quality of both sexes. The whole is written in very bad Latin, with a sprinkling of French words. Where the diseases are those of a nature not creditable to the moral antecedents of the sufferer, a *nom de guerre* is used. Thus Buckingham, who was constantly in trouble, is called "Palamedes," and Prince Charles is "Monsieur de la Fleur de Lys." Rochester ("Le Cardinal Joyeux") is continually being treated for "debilitas," although he is described as being "admodum salax." Here is a portrait of the Marchioness of Buckingham:—

"Januarii 24, 1622. Madame la Marquise de Buckingham. Annum ætatis agit xix. Habitus gracilis, corpus *μονογραμμον*. Temperamentum ex sanguineo biliosum. Faciei color floridus. Mores compositi. Summa cum gravitate modestia. Vitium conformationis in spina dorsi. Gravidæ est et credit longissimum partus terminum fore diem Annunciationis B.V.M. 25 Martii."

Again:—

"Preparationes missæ ad Ser Walter Raleigh; parandæ pro Ser Roger Aston."

"My lord Duc de Lenox, Diarrhœa a liberiori victu."

"Madame de Hadingthon, Affectus hystericus et melancholicus."

Mayerne was in charge of Henry, the Prince of Wales, whose sickness, spoken of by some of the physicians as a kind of "bastard tertian," was felt to be a malady before unknown. Other cases like it began to occur, and Mayerne's description of the prodromata, which lasted seven days, the "continual headache, laziness and indisposition increasing," as well as of the subsequent epistaxis, diarrhœa, and delirium, leaves little doubt that the "new disease" (as it was called in the case of the Countess of Oxford, who died of it) was typhoid fever. The prince was bled and purged, the head was shaved, and cupping glasses were applied to the back of the neck. On the following day "a cocke was cloven by the back and applied to the soles of his feet, but in vaine." After the twenty-third day all hope was abandoned, and he died on the twenty-eighth. Mayerne was much criticised by the profession in his own and other countries for the treatment, and after one Butler, of Cambridge, who was called in, had expressed himself that the patient should have been "blooded earlier," and should never have been purged, Mayerne withdrew. Subsequently when the king requested that he should take sole charge of the case, Butler having been dismissed for his rudeness, Mayerne refused the responsibility.

It is especially interesting to note how the friends of the patient meddled in the treatment. Sir Walter Raleigh, who was a friend to the young prince, sent from the Tower his famous fever cordial. The queen

specially recommended it, since she herself had, in a previous illness, derived much benefit from it. With a discretion not unparalleled in modern times Sir Walter sent with the cordial a message: "It would certainly cure Henry of a fever except in case of poison." So great was the public faith in this cordial that the very fact of the prince's dying at all was looked upon as proof positive that he must have been the victim of a murderous conspiracy. Sir Walter Raleigh was, by the way, very fond of amateur therapeutics. In a letter from John Chamberlen to Sir Dudley Carleton, in 1612, there occurs this passage: "The widow Countess of Rutland died about ten days since. Sir Walter Raleigh was slandered to have given her certain pills that despatched her."

James I. seems to have died of gout and chronic Bright's, with an intercurrent attack of ague. The autopsy, from which some whimsical conclusions were drawn, nevertheless is of scientific value so far as it recorded actual appearances, namely, atrophied kidneys, enlarged heart and spleen, even though the significance of these observations was unknown to the physicians. The explanation made by Sir Simon G. Ewes of the cardiac hypertrophy was that "the greatness of the king's heart argued him to be as very considerate, so extraordinary fearfull, which hindered him from attempting any great actions."

According to another account the head was found so full of brains that they could not keep them from falling out, "a great mark of his infinite judgment," but his blood was "tainted with melancholy, and the corruption thereof the supposed cause of death."

During the fatal illness of the monarch the old women of both sexes flocked about him and proffered all sorts of nostrums and advice. The Buckingham family went so far in their officiousness as to bring upon themselves the suspicion of trying to poison the king. They surreptitiously put plasters on his wrists to break up the chills. The doctors resented the interference, and refused to continue the treatment. Promises of good conduct having been made they saw his majesty through his fifth, sixth, and seventh fits. Again dissatisfied with the progress of the case, the Buckinghams applied their plaster, but the patient grew worse, and it is a matter of history that the royal surgeon had to get out of his bed to remove it. Dr. Craig was particularly incensed at these proceedings, and, according to Dr. Fuller,¹ "he uttered some plaine speeches, for which he was commanded out of court." The Duke of Buckingham secretly administered a julep, after which the king was said to have grown rapidly worse, and died, as our author says, for want of a shilling's worth of quinine. We may doubt if with such a heart and such kidneys even the quinine would have much prolonged his days, but the point suggests to one of imaginative tendencies an interesting question as to what would have been the effect in a primary therapeutic as well as in a secondary political point of view of modern medical methods in some of these cases.

Dr. Macdonnell remarks with no little ingenuity,

¹ Church History.

and, perhaps, with some truth, "Had Henry VIII. had a nineteenth century physician the disease from which he suffered would not have descended to his unborn children. Catherine of Aragon might have been the mother of many Tudors, the Stuarts would never have been heard of, the Reformation postponed, and Henry himself would have been talked of to-day as a model father and husband. Queen Mary's cruel disposition, if not the actual result, was certainly intensified by the disappointment which followed her fruitless marriage. Sir Henry Halford thinks that a course of aloes and iron might have changed the course of events in England and Europe."

We may on a future occasion have something further to say on this subject. It is one that certainly shows that professional life in some of its phases was not very different in the seventeenth century from that of to-day.

THE BOSTON LUNATIC ASYLUM. FORTY-FOURTH ANNUAL REPORT OF THE SUPERINTENDENT.

WE have just received the report of this old and valuable institution for the current year, which has proved an important one in the history of the asylum by reason of the inauguration of various changes in its administration under the direction of the superintendent, Dr. Theodore W. Fisher. For a number of years the institution had been allowed to fall behind the times in the matter of accommodations for the treatment of patients, under the feeling that the buildings, which represented those ideas of the management of the insane prevalent forty years ago, were so entirely unfitted for present methods that the expenditure of money to change them was useless until a radical overhauling of the whole institution could be made, and new buildings be substituted for the old. The original buildings partook more of the nature of a prison than of a hospital. "The doors were thick and solid, the windows heavily barred, and in one corner of each room was a triangular plank seat built into the brick walls. In some of these seats were staples, to which a violent lunatic in restraint could be fastened in a sitting posture." The ventilation was exceedingly inadequate. No provision was made for heating any room independently. The corridors were dark by day, and until 1851 were never lighted even at night.

Dr. Fisher assumed charge of the asylum under these unfavorable circumstances, but with an assurance from the trustees that something should be done to adapt the buildings tolerably to their purpose until something more radical could be done. In pursuance of this determination an appropriation was placed at the disposal of the superintendent, and the work has been well begun. A building erected in the old days, containing cells for the violent patients, but which more humane methods have rendered no longer necessary, has been converted into a boiler room, and steam-heating apparatus has been introduced. Ventilation has also been secured by the building of two

air-shafts from the basement in each wing, whereby the foul air is drawn from the rooms, and carried twenty feet above the roof. The dining facilities, which were before very imperfect, have been remedied by the erection of two new wings, containing six dining rooms, which will accommodate thirty persons each, and which command a good view of the harbor. Regarding the need for still greater improvements the superintendent says:—

"The hospital will now accommodate two hundred patients reasonably well. More room, more wards, more sunlight, and larger grounds for work and exercise, are the important things which must always be lacking here. The hospital, like all others in the State, is full, and the pressure for admission continues, and will increase. The friends of those we are unable to accommodate are always urging us to take just one more. They cannot see why they should be discriminated against in the occasional admissions now possible here. And it is unjust that three fourths of the city insane should be boarded in distant State hospitals, while the sick, the criminals, and the paupers are provided for nearer home. The insane, above all other classes, should be within easy reach of friends and home. It conduces to their contentment and happiness to feel that they are still residents of the city to which they belong, and not banished from familiar surroundings as well as from familiar faces. Their residence in hospital is often prolonged for years, and to be near home is the next best thing to being at home. To be banished so far from home as to debar them from the frequent visits of relatives and friends is a hard lot indeed. I find the harm resulting from a free visitation by friends infinitesimal compared with the good. Insanity is a disease which needs peculiar treatment, such as hospitals alone can afford, but it is not necessary, in my opinion, to isolate the patient for long periods from his friends at any stage of the case. A visit of short duration once a week is not hurtful, but beneficial, in my experience. With this belief I cannot but think it wrong to send city patients to State hospitals, entirely beyond civic control and supervision, where their poorer relations are prevented by the expense in time and money from visiting them. Boston, like every large city, should have within her limits hospital accommodation for every insane citizen."

The average weekly cost per inmate was of course increased during the past year by the extraordinary expenses above alluded to, but deducting these, the rate is only \$4.95, while that of the previous year was \$5.69.

The use of the camisole (the only form of restraint practiced) was given up for five months as a matter of experiment, though it was not claimed to have been absolutely abandoned. It was then used in a case of extreme exhaustion with excitement when it seemed necessary to save life, and has been sparingly used since, in similar cases, in pursuance of the policy not to forego it absolutely if a case seems to demand it.

The report contains a tribute of respect to the

memory and work of the former superintendent, the late Dr. C. A. Walker, of whom his successor says:—

"He was a man of strongly marked characteristics, of great energy, of sound judgment, large-hearted, and generous to a fault, making few enemies, but hosts of warm and lifelong friends. His humanity in dealing with the insane, his devotion to the interests of his patients, his persistent efforts for their thorough and permanent restoration, his patience in listening to the most tedious recital of suffering, and his open hand in the bestowal of relief, endeared him to all who knew him, or were benefited by his acts of kindness. His services for the city were held in high esteem by many successive Boards of Visitors and Directors. When, in ship fever and cholera times, he volunteered to go down to the sheds at Deer Island; or, later, he first set the example of the disuse of cells in the treatment of the insane; or, later still, endeavored to secure better hospital accommodation for the city's insane,—he always had the relief of suffering humanity nearest his heart."

MEDICAL NOTES.

—A Pittsburg lady doctor says that women can understand woman, and it often does a patient more good to talk to her of spring bonnets and wraps than is effected by medicine. Husbands and fathers want to look out for that lady physician. Instead of recommending fifty cents worth of aqua pura for a sick headache, she may prescribe a \$14 bonnet and a \$25 Surah overskirt, or something that way. — *Norristown Herald*.

—A druggist in Paris has been condemned to a week's imprisonment and 2000 francs damages for repeated sales of morphine to a lady, amounting in seventeen months to 693 grammes. His customer at first presented the medical prescription, without which no poisonous drug can legally be supplied, and on her second purchase produced the same prescription, but after this she went constantly to the shop without bringing any prescription, and she is now in a lunatic asylum. The husband then took legal proceedings, and has recovered damages.

Correspondence.

LETTER FROM BALTIMORE.

BALTIMORE, June, 1883.

MR. EDITOR,—Since the last letter of your Baltimore correspondent a great deal of interest to the public and the medical profession has taken place in this community. Too much, indeed, to be mentioned in detail in such a letter as this, but a few of the more important facts may be briefly noted. Our medical societies have been unusually active during the last "season," if I may use the term, and particularly the Clinical Society. This Society is composed principally of the younger and middle-aged men with a wise leaven of the older ones, and it is an encouraging sign, in connection with this and our other medical societies, that the younger men are participating more largely and frequently in their transactions than heretofore.

The influence of the Johns Hopkins University is beginning to be felt, and the spirit of original research and true scientific investigation have been fully aroused in the medical profession.

The Eighty-Fifth Annual Meeting of the Medical and Chirurgical Faculty of Maryland began on the 24th of April last, and continued until the 29th. It was one of the most successful meetings ever held by this Society. The reports of sections were unusually full, and quite a large number of original papers, some of special merit, were read. The feature of the occasion was, of course, the annual oration, delivered by Dr. John S. Billings, United States Army. The subject of his address, Medical Bibliography, was treated in his well-known skillful and interesting way. The address is well worthy of careful perusal, and will be published in full in the Transactions of the Faculty.

Dr. John N. Mackenzie, in a paper read before the Society at this meeting, claims to have localized experimentally an area of reflex excitability in the mucous membrane covering the turbinated corpora cavernosa of the nose. Irritation of this area gives rise to cough, and the cough is most constantly produced by artificial stimulation of the membrane clothing the posterior end of the inferior turbinated bone and that of the erectile body on the septum immediately opposite.

Another interesting matter was brought before the meeting by Dr. St. George W. Teackle, State vaccine agent, who was requested, as "an expert," to pronounce upon an eruption which had appeared upon the udders of four Alderney cows, on a farm near Baltimore, about the middle of last January. From the appearance of the eruption, its history, and the surroundings of the cattle, Dr. Teackle pronounced it genuine vaccinia, spontaneous in the first case. With a crust from No. 1 he inoculated five primary and three secondary cases, and reported success in all but one primary and one secondary. In all the cases there was great fever and glandular swelling. Dr. Walsh, of Washington, experimented with a crust from No. 1 with negative results. Dr. Teackle also inoculated a heifer, eight weeks old, with a crust from No. 1, April 20th, and exhibited the calf before the Faculty, April 28th. As, in the discussion which followed, the spontaneity and genuineness of the supposed vaccinia were questioned, a committee was appointed to watch the progress of the eruption, and report at a future meeting of the Faculty. The committee has not yet reported, but your correspondent understands that a majority of the committee do not regard the eruption as genuine vaccinia. An interesting fact in regard to the investigations of the committee is that in three primary cases inoculated from the same crust as was the heifer, and made by a member of the committee, the only result was the raspberry tubercle so commonly met with last winter, at least in Baltimore, as a result of vaccination with bovine virus.

The advent of hot weather has caused all our medical societies to adjourn until the autumn.

Many of the readers of the JOURNAL are no doubt aware that the Johns Hopkins Hospital, our "pride and boast," is at this time almost ready to receive patients and offer clinical advantages to students. Indeed, the trustees of the university and hospital are even now considering the earliest time for opening the hospital and starting the medical school. The buildings of the hospital, which are nearly finished, and with whose completion it is expected that patients will be

received and medical instruction given, are the administration building and annex, two private, four public wards, and an isolating ward, the autopsy room, dispensary (including the amphitheatre), laundry, kitchen, and nurses' home buildings. Three professors for the medical department of the university have been selected. Professor Remsen of chemistry, Professor Martin of biology, and Dr. Billings of hygiene. It is, however, not as yet known whether the last-named gentleman will accept.

A controversy in the boards of trustees of the university and hospital, which has been agitating the community for about a year, and which, unless speedily and finally settled, seems likely to imperil the success of both institutions, has at length reached a climax. Many months ago the minority of both boards, particularly that of the university, finding the majority were bent upon carrying out measures which they conceived to be illegal and contrary to Mr. Hopkins' intentions, — implied if not expressed — appealed to public opinion in speeches and through the daily press. This agitation has been promoted by various contributions from outsiders, some now residents of the State, who think themselves entitled and qualified to speak in the matter.

In an address delivered on the 30th of January last before the Young Men's Christian Association of this city, Mr. John W. Garrett, President of the Baltimore and Ohio Railroad, and a member of both boards of trustees, made a violent attack on the management of both university and hospital. He says: "The grounds and buildings of the hospital have already cost more than \$1,200,000, and more than nine years have elapsed since the death of the founder, and not one patient, nor one of the suffering indigent sick of Baltimore, has yet received any benefit from this vast expenditure." And he further asks, "What has the university done?" although it has, with great expense, been located in the midst of the city instead of at Clifton (the country seat of Mr. Hopkins, just outside the city limits), which was designated as its situation "not only by the well-known will and instructions of the founder, but by the absolute requirements of law." He is glad, however, to inform his hearers "that a committee, appointed by the board of trustees of the hospital, recently demonstrated that, with proper systematic effort, important and desirable portions of the hospital can be opened in the autumn of the present year, and that an earnest minority in the board of trustees of the university is urging that medical classes be at once established."

This address has been published in pamphlet form, and, probably, five thousand copies distributed in Maryland, with the avowed object of inducing the Legislature to alter the charter of the university, and compel the trustees to remove to Clifton the branches now established in Baltimore. A hundred copies of the pamphlet were sent to the university with the singular request that they should be delivered to the students to whom they were addressed.

A semi-official reply, in the form of an open letter, signed by a majority of the trustees, was published shortly after the delivery of Mr. Garrett's address, and was thought by many to be conclusive. Volunteer contributions, however, continued to appear, and Mr. Garrett's address to be referred to approvingly by the daily press, so that a more complete reply seemed called for. Accordingly, on the 23d of last month,

the Hon. George Wm. Brown, chief judge of the city, and himself a member of both boards of trustees, addressed an open letter to Mr. Garrett, in which he refutes the latter gentleman's charges, answers his queries, and completely vindicates the action of the majority of the trustees. The following is a brief summary of his letter, which will be published in pamphlet form:—

Neither the charter nor Mr. Hopkins' will designates Clifton as the seat of the university. The charter, indeed, provides that it be located in Baltimore County, but a codicil to the will authorizes the trustees to ask for and obtain any alteration to the charter which they may think proper. In accordance with this provision the trustees obtained an act of legislature altering the charter, and authorizing them to "establish branches of the said university in the city of Baltimore, and to hold, or purchase and hold, all property in said city needed for the successful conducting of the branches of the said university in the said city, and to keep and maintain a principal office in the said city for the conduct of the business of the university."

Under this act they erected the necessary buildings, and established the branches of the university at present in existence. The university thereby acquired vested rights which the State Legislature is powerless to violate by enacting that the branches already established must be transferred to Clifton. Judge Brown reminds Mr. Garrett that the principle governing such action was settled by a case involving the possession of its Pittsburgh and Connellsville branch by the Baltimore and Ohio Railroad. He also reminds Mr. Garrett that shortly after Mr. Hopkins' death the trustees began to improve the Clifton estate with a view to locating the university there at once, but after the expenditure of a considerable amount of time and money it was decided to open the university in the city, Mr. Garrett being one of those approving this course of action. Clearly if it was right to begin the university in the city it is right to continue it there as long as a majority of the trustees think proper. He states, what is generally accepted as a fact, that Clifton is at present too unhealthy on account of malaria for the site of a university, and that to bring the grounds into a healthy condition, and erect there the buildings necessary for conducting such an institution, which under the will would have to be done from the income, would involve sufficient expense to cripple the university, and degrade it from a first-class university to a second-class college. Whereas if there was one thing about which the intentions of Johns Hopkins were clearly expressed, both in and out of his will, it was that the institution founded by him should be a university.

In answer to Mr. Garrett's question, "What has the university done?" Judge Brown replies that "it has attained to an acknowledged rank among the best institutions of this country as a place for the advancement of knowledge or the education of scholars. . . . It has established laboratories of chemistry, physics, and biology where some important discoveries have been made, and great facilities have been given for the study of those sciences. It has published seven serial publications for philology, mathematics, chemistry, biology, physiology, history, and for general information. . . . By its fellowships it has been the means of training ninety young men, of whom fifty-five have

attained good positions as teachers in colleges and kindred establishments, and twenty-three are still resident here. It has taught 535 students, of whom over 100 are known to have taken honorable stations as teachers in such institutions as Harvard, Princeton, Cornell, Lafayette, the 'universities of Virginia, North Carolina, Louisiana, Michigan, and several other colleges and universities.' 'It has given Hopkins Scholarships to eighty-five young men. It has attracted during the year advanced students from more than sixty other institutions,' and 'has a very far larger number of advanced students than any college or university in the United States, more, I believe, than all together. . . . It has given ninety courses of lectures by eminent men on a great variety of subjects to which the public have been admitted gratuitously. It has collected a library of 17,000 volumes and scientific instruments which have cost about \$50,000."

These and many other important things Judge Brown shows that the university has done, and cites an anonymous writer in "the journal called *Education*," who claims that "all strong colleges will follow the example of Baltimore." He further calls attention to the undergraduate department of the university, in which "seven courses have been prepared with great care for the wants of those intended for different colleges, all tending to the same academic degree." Mr. Garrett's attractively-sounding plan for the "wise utilization" of "the vast and splendid estate of Clifton" Judge Brown characterizes as "a vague and fanciful sketch," and shows that for its accomplishment the university would be starved for want of means, and become practically useless.

With regard to the speedy opening of the hospital he says, "It is the object of the board to make the hospital the most complete in the world, and I believe they will succeed in the attempt. To accomplish this extraordinary pains have been taken and expense has not been spared. It would be bad economy to retard the completion of so noble a work by a premature and partial opening."

It may seem a little peculiar to some of the readers of the *JOURNAL* that a trustee should pursue such a course as has Mr. Garrett towards his fellow-trustees. Judge Brown certainly so regards it, and in the conclusion of his letter speaks of it in the following way:—

"As differences of opinion necessarily arise in every board the rule of law is that in all questions on which it is required to vote the majority must prevail, and, therefore, the minority must submit. If in the opinion of the minority the majority has by its vote violated legal obligations, then it is the right of the minority to apply to the courts for redress. Here the law ends, but there is a well-settled rule of decorum which forbids that a dissatisfied member should bring his grievances before the public, and assail his associates in speeches and newspaper articles."

It is devoutly to be wished that this letter may end the controversy, and the university be allowed to pursue the "even tenor of its way;" unfortunately, however, this does not seem likely to be the case.

I may add in conclusion that the university held its seventh annual commencement on the 7th of this month, and President Gilman has sailed for Europe, partly for pleasure and partly on business connected with the medical school.

Very respectfully,

B.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 16, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	551	217	25.76	9.80	9.07	5.62	3.81
Philadelphia.....	846,984	891	140	17.20	2.53	—	6.58	5.56
Brooklyn.....	566,689	221	104	21.24	11.30	10.40	4.97	1.36
Chicago.....	503,304	—	—	—	—	—	—	—
Boston.....	362,535	193	62	26.66	10.34	5.44	3.81	11.42
St. Louis.....	350,522	126	53	28.80	12.80	7.90	6.40	3.20
Baltimore.....	332,190	131	65	25.94	6.10	7.63	6.10	6.87
Cincinnati.....	255,708	86	27	13.93	16.25	1.16	—	4.64
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	—	—	—	—	—	—	—
Pittsburg.....(1883)	175,000	45	16	26.64	11.11	13.33	4.44	2.22
Buffalo.....	155,137	76	21	14.46	7.89	1.34	1.34	2.68
Milwaukee.....	115,578	42	18	19.04	7.14	2.38	4.76	—
Providence.....(1883)	116,755	45	10	11.11	2.22	4.44	—	—
New Haven.....(1883)	73,000	16	5	31.25	12.50	—	6.25	6.25
Charleston.....	49,999	34	16	8.82	2.94	2.94	—	—
Nashville.....	43,461	21	9	42.84	4.76	4.76	4.76	4.76
Lowell.....	59,485	27	10	7.41	11.11	—	—	—
Worcester.....	58,295	17	10	11.76	11.76	—	5.88	—
Cambridge.....	52,740	29	13	24.15	10.35	—	6.90	3.45
Fall River.....	49,006	16	4	12.50	12.50	—	12.50	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	21	9	28.56	14.28	—	—	—
Springfield.....	33,340	14	2	21.43	—	7.14	7.14	—
Salem.....	27,598	7	4	28.56	—	—	14.28	—
New Bedford.....	26,875	10	3	10.00	20.00	10.00	—	—
Somerville.....	24,985	10	3	30.00	20.00	10.00	—	—
Holyoke.....	21,851	8	2	25.00	12.50	—	12.50	—
Chelsea.....	21,785	8	3	—	12.50	—	—	—
Taunton.....	21,213	7	0	14.28	—	—	—	—
Gloucester.....	19,329	4	3	25.00	—	—	25.00	—
Haverhill.....	18,475	8	2	25.00	25.00	—	12.50	—
Newton.....	16,995	4	2	—	—	—	—	—
Brockton.....	13,608	3	0	12.50	12.50	—	12.50	—
Newburyport.....	13,537	4	0	25.00	—	—	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	—	—	—	—	—	—	—
Twenty Massachusetts towns.....	153,328	59	16	13.55	6.78	1.69	5.08	3.39

Deaths reported 2239 (no reports from Chicago, New Orleans, and District of Columbia): under five years of age 849; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 485, consumption 333, lung diseases 191, diarrhoeal diseases 122, diphtheria and croup 112, scarlet fever 83, measles 62, typhoid fever 28, cerebro-spinal meningitis 21, malarial fevers 17, erysipelas 14, puerperal fever 11, small-pox nine, whooping-cough six. From *measles*, New York 19, Boston 14, Brooklyn five, Cambridge four, Philadelphia four and Baltimore three each, St. Louis, Pittsburg, Nashville, and Lynn two each, Buffalo, Salem, Somerville, and Haverhill one each. From *typhoid fever*, Philadelphia nine, Boston four, New York three, Brooklyn, St. Louis, Baltimore, Pittsburg, Buffalo, Providence, New Haven, Nashville, Lowell, and Westborough one each. From *cerebro-spinal meningitis*, New York and Milwaukee four each, Buffalo three, Philadelphia two, St. Louis, Cincinnati, Providence, Charleston, Worcester, Lynn, Somerville, and Holyoke one each. From *malarial fevers*, New York six, St. Louis three, Brooklyn and Baltimore two each, Charleston, Nashville, Springfield, and Westfield one each. From *erysipelas*, New York five, Cincinnati and Lynn two each, Philadelphia, Brooklyn, Buffalo, Lowell, and Newburyport one each. From *puerperal fever*, Philadelphia and Boston two each, New York, Brooklyn, St. Louis, Buffalo, Milwaukee, Providence, and Taunton one each. From *small-pox*, St. Louis five, Philadelphia and Nashville two each. From *whooping-cough*, New York two, Philadelphia, St. Louis, Baltimore, and Lynn one each.

Twenty-four cases of small-pox were reported in St. Louis, Baltimore one, Boston one; measles 141, scarlet fever 32, diphtheria 24, and typhoid fever six in Boston; scarlet fever 16, and diphtheria 11 in Milwaukee.

In 37 cities and towns of Massachusetts, with an estimated population of 1,110,664 (estimated population of the State

1,922,530), the total death-rate for the week was 21.06 against 19.18 and 19.66, for the two previous weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending June 2d, the death-rate was 19.4. Deaths reported 3212: acute diseases of the respiratory organs (London) 246, measles 98, whooping-cough 78, scarlet fever 62, fever 52, diarrhoea 42, diphtheria 24, small-pox (London two, Liverpool, Hull, and Newcastle one each) five. The death-rates ranged from 13.1 in Brighton to 26.9 in Hull; Sunderland 15.5; Birmingham 16.7; Plymouth 17.4; Leicester 18.1; London 18.5; Sheffield 20.3; Leeds 22.9; Liverpool 25.1; Manchester 25.2. In Edinburgh 21; Glasgow 27.4; Dublin 31.8.

For the week ending May 26th, in 169 German cities and towns, with an estimated population of 8,659,662, the death-rate was 26.8. Deaths reported 4464; under five years of age, 1078; consumption 691, lung diseases 580, diarrhoeal diseases 157, diphtheria and croup 153, measles and röteln 97, scarlet fever 67, whooping-cough 47, typhoid fever 38, puerperal fever 13, small-pox (Breslau two, Beuthen, Gortitz, Bremen, Cologne Achen, and Frankfurt a. M. one each) eight, typhus fever (Königsberg, Bromberg, Leipzig, and Braunschweig one each) four. The death-rates ranged from 18 in Wiesbaden to 40.3 in Würzburg; Königsberg 32.3; Breslau 30.5; Munich 32.1; Dresden 26.3; Berlin 28.4; Leipzig 24; Hamburg 28; Cologne 29; Frankfurt a. M. 25.4; Strasburg 27.3.

For the week ending June 2d, in the Swiss towns, there were 32 deaths from consumption, diarrhoeal diseases 17, lung diseases 15, measles 12, diphtheria and croup six, whooping-cough four, erysipelas three, scarlet fever two, typhoid fever one. The death-rates were at Geneva 15.4, Zurich 8, Basle 23, Berne 27.1.

The meteorological record for the week ending June 16th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
June, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 10	29.773	76	88	65	90	56	90	79	SW	SW	S	6	10	2	O	F	C	—	—
Mon., 11	29.568	73	86	65	93	57	66	72	S	S	W	8	11	12	R	F	C	—	—
Tues., 12	29.677	74	84	61	51	40	68	54	SW	SW	SW	20	16	14	C	C	C	—	—
Wed., 13	29.673	73	89	67	71	76	84	77	SW	SW	W	12	10	10	F	C	C	—	—
Thurs., 14	30.095	62	72	57	60	38	60	53	NW	SE	NW	24	6	2	C	L	C	—	—
Fri., 15	30.276	63	75	53	59	63	72	65	NW	E	S	5	10	4	C	F	C	—	—
Sat., 16	30.224	62	71	54	58	48	69	58	S	SE	S	9	16	6	O	F	F	—	—
Means, the week.	29.898	69	89	53				65										7.05	.25

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 23, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	539	250	31.45	11.66	14.25	8.25	3.25
Philadelphia.....	846,984	307	130	23.73	11.70	7.80	5.75	3.90
Brooklyn.....	566,689	236	105	25.38	13.11	13.11	5.08	4.65
Chicago.....	503,304	187	98	27.77	5.34	8.54	7.48	1.60
Boston.....	362,535	148	60	26.35	8.11	8.79	8.79	2.70
St. Louis.....	350,522	159	76	17.61	—	—	3.77	6.29
Baltimore.....	332,190	152	56	22.05	2.52	7.56	5.67	2.52
Cincinnati.....	255,708	104	47	18.24	9.60	11.52	.96	1.92
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	—	—	—	—	—	—	—
Pittsburg.....(1883)	175,000	63	33	25.12	9.42	9.42	4.71	—
Buffalo.....	155,137	53	17	20.79	7.56	3.78	8.78	11.34
Milwaukee.....	115,578	46	20	17.39	3.78	3.78	3.78	1.89
Providence.....(1883)	116,755	30	8	20.00	10.00	3.33	13.33	—
New Haven.....(1883)	73,000	25	9	24.00	8.00	4.00	—	4.00
Charleston.....	49,999	—	—	—	—	—	—	—
Nashville.....	43,461	19	10	36.82	5.26	—	—	—
Lowell.....	59,485	18	10	11.11	—	—	5.55	—
Worcester.....	58,295	12	4	8.33	8.33	8.33	—	—
Cambridge.....	52,740	18	4	16.66	—	—	5.55	—
Fall River.....	49,006	20	8	10.00	10.00	10.00	—	—
Lawrence.....	39,178	8	2	12.50	—	—	12.50	—
Lynn.....	38,284	4	3	25.00	25.00	—	—	—
Springfield.....	33,340	15	8	26.66	13.33	—	—	—
Salem.....	27,598	11	2	18.18	—	—	—	—
New Bedford.....	26,875	4	0	—	25.00	—	—	—
Somerville.....	24,985	15	5	39.99	6.66	26.66	6.66	—
Holyoke.....	21,851	9	3	22.22	11.11	11.11	—	—
Chelsea.....	21,785	8	4	12.50	12.50	—	—	—
Taunton.....	21,213	4	0	—	—	—	—	—
Gloucester.....	19,329	7	4	14.28	—	—	14.28	—
Haverhill.....	18,475	5	2	20.00	—	—	—	—
Newton.....	16,995	5	0	20.00	—	—	—	—
Brockton.....	13,608	4	1	—	—	—	—	—
Newburyport.....	13,537	12	7	16.66	—	8.33	8.33	—
Fitchburg.....	12,405	3	0	—	—	—	—	—
Malden.....	12,017	—	—	—	—	—	—	—
Twenty Massachusetts towns.....	152,663	43	8	6.98	—	2.33	—	—

Deaths reported 2293 (no reports from New Orleans, District of Columbia, and Charleston): under five years of age 994: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 565, consumption 270, lung diseases 187, diarrhoeal diseases 214, diphtheria and croup 107, scarlet fever 72, measles 52, typhoid fever 29, cerebro-spinal meningitis 26, malarial fevers 22, whooping-cough 19, puerperal fever eight, erysipelas seven, small-pox six, typhus fever three. From *measles*, New

York 19, Boston eight, Baltimore seven, Philadelphia and Pittsburg four each, Brooklyn three, Cincinnati, New Haven, Nashville, Springfield, Salem, Newton, and Westfield one each. From *typhoid fever*, New York eight, St. Louis five, Philadelphia and Chicago four each, Brooklyn and Pittsburg two each, Baltimore, Cincinnati, Buffalo, and Somerville one each. From *cerebro-spinal meningitis*, New York eight, Chicago six, Springfield three, Milwaukee two, Philadelphia, St. Louis, Providence, Lowell, Holyoke, Haverhill, and Weymouth one each. From

malarial fevers, New York 10, Chicago and New Haven three each, Philadelphia and Brooklyn two each, St. Louis and Baltimore one each. From *whooping-cough*, New York eight, Chicago five, Philadelphia three, Brooklyn, St. Louis, and Lynn one each. From *puerperal fever*, Cincinnati two, New York, Chicago, Boston, St. Louis, Cambridge, and Salem one each. From *erysipelas*, New York three, Brooklyn, Pittsburg, Milwaukee, and Cambridge one each. From *small-pox*, St. Louis three, Philadelphia two, Baltimore one. From *typhus fever*, Philadelphia three.

Nineteen cases of small-pox were reported in St. Louis, Baltimore three, Boston one, Buffalo one; measles 81, diphtheria 24, scarlet fever 21, typhoid fever eight in Boston; scarlet fever five, and diphtheria one in Milwaukee.

In 39 cities and towns of Massachusetts, with an estimated population of 1,169,950 (estimated population of the State 1,922,530), the total death-rate for the week was 16.97 against 21.06 and 19.48, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending June 9th, the death-rate was 19.5. Deaths reported 3223: acute diseases of the respiratory organs (London) 226, measles 139, scarlet fever 73, whooping-cough 61, diarrhoea 58, fever 34, diphtheria 28, small-pox (Newcastle four, London three, Liverpool

one) eight. The death-rates ranged from 14.7 in Bristol to 28.4 in Blackburn; Cardiff 16.8; Leeds 17.5; Birkenhead 18.2; Birmingham 18.4; London 18.5; Leicester 18.5; Manchester 22; Sunderland 22.8; Liverpool 25.5. In Edinburgh 17.9; Glasgow 33.9; Dublin 28.3.

For the week ending June 2d, in 168 German cities and towns, with an estimated population of 8,641,299, the death-rate was 26.8. Deaths reported 4457; under five years of age, 2145; lung diseases 652, consumption 635, diarrhoeal diseases 214, diphtheria and croup 135, measles and röteln 111, scarlet fever 56, typhoid fever 50, whooping-cough 48, puerperal fever 18, small-pox (Bremen two, Heilbronn one) three, typhus fever (Stettin one) one. The death-rates ranged from 14.7 in Wiesbaden to 35.7 in Kiel; Königsberg 30.4; Breslau 28.4; Munich 33.2; Dresden 25.4; Berlin 32; Leipzig 20.4; Hamburg 28.3; Cologne 28; Frankfurt a. M. 24.7; Strasburg 30.6.

For the week ending June 9th, in the Swiss towns, there were 26 deaths from consumption, lung diseases 24, diphtheria and croup 10, diarrhoeal diseases eight, scarlet fever four, measles three, whooping-cough one, puerperal fever one. The death-rates were at Geneva 11.3, Zurich 10, Basle 19.1, Berne 24.6.

The meteorological record for the week ending June 23d, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
June, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 17	30.121	61	65	55	78	78	75	77	SW	SE	S	5	13	4	O	F	O	—	—
Mon., 18	30.068	64	70	57	87	66	94	82	SE	SE	SE	5	6	8	O	O	O	—	—
Tues., 19	29.817	69	75	61	93	71	93	86	S	S	S	8	9	3	O	O	O	—	—
Wed., 20	29.747	71	80	63	90	69	93	84	S	S	W	8	12	7	O	O	O	—	—
Thurs., 21	29.817	68	80	62	73	76	84	78	SW	W	W	5	6	6	O	R	F	—	—
Fri., 22	29.922	68	84	60	59	62	87	69	W	SE	SE	7	10	1	O	F	F	—	—
Sat., 23	29.963	72	81	64	62	55	78	65	NW	SE	SW	5	9	5	C	C	C	—	—
Means, the week.	29.922	68	84	55				77										5.10	.06

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

HARVARD MEDICAL SCHOOL.

At the annual commencement of Harvard University the following students received the degree of Doctor of Medicine:—

FOUR YEARS' COURSE.

Franklin Asaph Dunbar, A. B.
 Harry Madison Cutts, A. B.
 Samuel Delano, A. B.
 Francis Xavier Dervin.
 Fred William Kennedy.
 William Henry Devine.
 Philip Coombs Knapp, A. B.,
 Michael Ricard Donovan, A. B.,
cum laude.
 Asbury Gilbert Smith.
 Charles Stein Dunn.
 Edward Winslow Warren, A. B.
 Harry Winthrop Faulkner.
 Patrick Joseph Finnigan, A. B.
 Henry Austin Wood, A. B.,
 Charles Chauncy Foster, A. B.,
cum laude.

THREE YEARS' COURSE.

Albert Clinton Aldrich, A. B.
 Clarence Miles Godding, A. B.
 Bradford Allen, S. B.
 Arthur George Griffin.
 Louis Edmund Allen, A. B.
 Charles Henry Grimm.
 Charles Augustus Atwood.
 Ramon Benjamin Guitéras.
 David Erastus Baker, B. S.
 William Dudley Hall, A. B.
 Frederic Melancthon Briggs,
 George Haven.
 A. B.
 Parke Woodbury Hewins, A. B.
 Fred Alpheus Chandler.
 Andrew Hall Hodgdon, A. B.
 Clarence Alonzo Cheever, B. S.
 Charles Sumner Holden.
 A. S.
 Frank Holyoke.
 Adam Stuart Muir Chisholm.
 Rufus Peabody Hubbard.
 Henry Tisdale Coggeshall.
 George Wood Huse, A. B.
 Charles Hale Cogswell, A. B.
 Alton Atwell Jackson.
 Ralph Marcus Cole.
 Frank Mackie Johnson, B. S.
 Joseph Daniel Couch.
 Herbert Shattuck Johnson,
 A. B.
 Thomas Edward Cunningham.
 Lawrence Grafton Kemble.

Freeman Alexander Mackenzie.

Francis Coffin Martin, A. B.
 Rufus Cyrene McDonald.
 William Henry McOwen.
 Joseph Briggs Murphy.
 Henry Sharwood Otis.
 James Cogswell Dumaresq
 Pigeon, A. M.
 Wallace Preble, A. B.
 George Edward Richards, A. B.
 Frederick Jerome Ripley, A. B.
 Charles Dexter Sawin, S. B.
 Columbus Sewell Scofield.
 Charles Edward Simpson.

Hayward Stetson, A. B.
 William Caldwell Stevens, A. B.
 William Stanford Stevens, A. B.
 Benjamin Ropes Symonds.
 William Allen Tremaine.
 John Trumbull, A. B.
 Charles Everett Warren, A. B.
 Charles Edward Webster.
 James Lee Wells, A. B.
 Arthur Bryant Wetherell.
 Leonard Darling White.
 Roland Barker Whitridge.
 Walter Woodman, A. B.
 Alfred Worcester, A. M.

The name of Lester Sackett Ford, B. A. S., is to be placed in the quinquennial catalogue with the class graduating this year, his death having taken place after all the examinations required for the degree had been passed.

The degree of Master of Arts was conferred on the following students of the four years' course: Franklin Asaph Dunbar, A. B., Philip Coombs Knapp, A. B., Edward Winslow Warren, A. B., Henry Austin Wood, A. B.

CORRECTION.

MR. EDITOR, — The following correction should be made on page 558 of the Boston Medical and Surgical Journal of June 14, 1883. In the table of Analyses of Infant Foods, opposite Mellin's Food, and under Starch, the "4" is a misprint for "—." As is well known this food contains no starch.

Yours truly, B. F. DAVENPORT.

Original Articles

THEORIES REGARDING THE MECHANISM OF THE INORGANIC CARDIAC MURMURS¹

BY G. M. GARLAND, M. D.,

Assistant in Clinical Medicine, Harvard Medical School.

ANÆMIC MURMURS.

ALMOST immediately with the discovery of cardiac murmurs and their association with valvular deficiencies of the heart it was likewise discovered that murmurs in the cardiac region are not all referable to such deficiencies of the valves. As early as in the twenties of this century, and especially during the thirties, we find evidence, clinical and post mortem, rapidly accumulating to prove the existence of five distinct groups of præcordial murmurs:—

(1.) Murmurs associated with organic alterations of the cardiac orifices. *Organic murmurs.*

(2.) Murmurs accompanying anatomical defects in the development of the heart. *Congenital murmurs.*

(3.) Murmurs which are temporary in duration, which occur during certain fevers and constitutional conditions, but disappear on restoration of health.

(4.) Murmurs which are observed before death, but for which no anatomical explanation is discoverable after death. *Inorganic murmurs.*

(5.) Murmurs which are produced by pathological changes in the various tissues immediately surrounding the heart, pericarditis, pleuritis, aneurism, pressure on large vessels from tumors, or solidified lung, cardiac respiration, etc. *Pseudo-cardiac murmurs.*

The first two groups and the last one have been ably treated by my friend, Dr. Shattuck, this evening, and, therefore, I propose to speak only of the history and present status of the theories regarding the third and fourth groups.

With the announcement of the fact that blood murmurs may occur in the region of the heart without the presence of any organic lesion of that organ a violent warfare broke out among authorities as to the seat of those murmurs. Each cardiac orifice in turn was accused of producing *murmurous* riot, while each in turn was denied any participation in the same. It was early and generally allowed that these murmurs are *systolic* in rhythm,² and the strife regarding their location was gradually narrowed down to the following theorems:—

Hope and his followers in the English school maintained that inorganic murmurs are produced exclusively at the aortic or pulmonic orifices, and are audible only at the base of the heart.

Stokes and his followers in Dublin maintained with equal vehemence that they had heard murmurs at the apex which were temporary in duration, and yet at post mortem no disease of the cardiac valves was discoverable.

The feeling between the two schools on this topic was very bitter, and Stokes complained in a private letter to a friend that Hope had injured him in a case cited by giving an opposite opinion regarding an apex murmur.

Since those days, however, the gradual accumulation of evidence has gone to show that inorganic murmurs

may be heard at the apex as well as at the base of the heart. While it is true that an intra-cardiac murmur at the apex of the heart, as a rule, indicates mitral disease, yet such murmur may be independent of anatomical changes in the mitral or tricuspid valves.

At present the inorganic murmurs are divided into two groups, as follows:—

(1.) Murmurs which are audible only at the base of the heart.

Such murmurs occur in typical form with chlorosis, and are called *hæmic murmurs*.

(2.) Murmurs which are heard at the apex.

This group appears during chorea, and are called *dynamic murmurs*.

These groups differ essentially in the interpretations which have been applied to them, and, therefore, we will consider them separately, beginning with the basic or

Hæmic Murmurs. Next in importance to the warfare over the location of these murmurs has been the strife over their interpretation and over the explanation of their origin. Many of the theories at first advanced were purely imaginative, and grossly opposed to well-known physical laws. As in the history of all natural phenomena which have attracted man's attention the early explanations have been purely speculative theories, and only at later periods, when the rules of scientific methods were applied, have we obtained any reliable working hypotheses. Such has been the history of hæmic murmurs. It is much easier to speculate than to investigate.

It would consume too much space to quote at length from all the authors who have attempted to illumine this topic, and, as may be seen below, the mere enumeration of their theories makes quite a formidable list:—

Spasm of the vessels (Laennec). Friction of blood against the arterial wall. Density of the blood. Velocity of the blood. Tension of the vascular walls. Vibrations of the vascular walls. Folds of the inner coat of the artery (Vernois). High blood tension (Beau). Low blood tension. Constriction of artery. Presstrahl (Niemeyer). Prolongation of the first heart sound behind the sternum (Monneret). Spasmodic contraction of the cardiac orifices causing obstruction to the blood currents (Andral). Diminished tension of the blood alters the swinging of the valves, and allows the valve-tips to lie over each other in systole. Twisting of the aorta (Marey). Twisting of the pulmonary artery (Nixon). Vibrations of the mitral valves transmitted along the wall of the pulmonary artery (Meyer). Density of the blood (Bouilland).

The first theory which attained to any extended following was that of the friction of the blood against the vascular walls, and this was warmly championed by so able a knight as Skoda. Vernois sought to strengthen it by supposing that the friction is increased by projecting folds of the arterial wall, a condition of things which, it is needless to say, has never been observed, and is merely imaginative.

The friction theory, however, was soon proven wrong by the researches of Kiwisch, Chauveau, and Helmholtz, who showed by experiments in physics that no friction is possible between a fluid and its containing tube so long as the fluid is capable of wetting the surface of the tube.

Then arose the theory of *inter-molecular friction*, which was expressed by Leared in 1852, that the soufflé is due to a reciprocal pressure of the particles of the circulatory fluid, from which results that the primordial current is divided into secondary currents,

¹ Read before the Suffolk District Medical Society, April 28, 1883.

² Three cases of diastolic functional murmurs have been reported. See Dr. Shattuck's article in this number of the JOURNAL.

and the molecules instead of preserving a uniform relation in their movement acquire a new and irregular impulsion.

In order to more clearly understand this inter-molecular theory it will be necessary to understand certain experiments made upon water flowing through tubes. It was found that no murmur is produced when water flows quietly through a tube of uniform calibre. If the water be forced along with great velocity a murmur will be heard. Again, if a constriction in the lumen of a tube be produced at any point a murmur will be audible beyond the constriction at a much less velocity of the water. The passage of the fluid through a narrow strait into a wider basin causes a series of "eddies" and counter-currents, which, by their mutual friction, produce sound.

Now it was obvious that the blood does not, ordinarily at least, flow with sufficient velocity to produce a murmur under the conditions given for a tube of uniform calibre, hence the claim of vascular constrictions, either at the cardiac orifices or in the course of the veins and arteries, was advanced, and this formed the essence of Niemeyer's "*Pressstrahl*" theory. Moreover, to insure the necessary constriction of the tube numerous subsidiary theories were advanced, such as a supposed twist at the beginning of the aorta during systole (Marey); a twist at the root of the pulmonary artery (Nixon); a spasmodic contraction of the cardiac orifices (Andral). Such theories as these, however, regarding spasm and twist, are mere conjecture, and entirely destitute of experimental or anatomical proof. Constriction of the aorta or pulmonary artery will produce murmurs. This much we know. But that such constrictions occur rhythmically and intermittently with the action of the heart is too visionary for credence.

To seek escape from the dilemma presented by the apparent lack of constriction in the arteries mentioned, attention was directed to the condition of the blood itself. It is a notorious fact that basic and other vascular murmurs are most common with chlorosis, and that in this disease the blood is poor in quality. Accordingly some observers maintained that a watery condition of the blood was conducive to murmurs. Skoda opposed this idea vigorously, and declared that he had frequently sought for such murmurs after severe hæmorrhage, and never found them. Bouillaud, however, studied the subject more deeply, and measured the density of the blood in chlorotic cases, and he declares that the *bruit de diable* exists, as a general rule, in individuals whose blood has a less density than six degrees of the aréomètre of Beaumé, and does not appear so long as the density exceeds that figure. Then Williams, Weber, Nolet, and Richardson experimented on fluids forced through tubes, and declare that the ease with which murmurs can be thus produced stands in an inverse ratio to the density of the fluid, and when water is added to blood a murmur is elicited more easily than when blood alone is used. Richardson says: "It is now understood that fluids are not only conductors of sounds, but that they produce sounds under certain conditions. . . . If our blood were reduced to the condition of distilled water, and we could live and hear as we do now, we should, probably, always be conscious not only of the heart sounds, but of a soft, internal musical murmur, produced in our own vessels." Leared also shows that in order to obtain fluid friction the currents need not flow in opposite

directions. It is only necessary that one current be faster than the others.

It was long supposed that the blood tension in chlorosis was diminished, and those who talked about a twisting of the aorta and pulmonary artery all assumed and asserted such diminution of blood tension. Bamberger speaks of abnormal relaxation of pulmonary artery. Nixon speaks of "loss of arterial tonicity." Marey bled animals, and finding that such bleeding was followed by a murmur, attributed such murmur to low tension in the aorta. It has been well said, however, that if Marey's theory be correct we ought to hear a murmur in the aorta every time we have a diastolic pulse, but such is not the case.

Similar experiments upon the effects of bleeding were made by Beau, Vulpian, and Deschambre, and they all found that a hæmorrhage does not immediately produce a murmur. The first effect of bleeding is, of course, to empty the vessels and lower the blood tension. Immediately, however, the vessels begin to absorb water from the neighboring tissues, and thus rapidly renew the bulk of fluid which they lost. By this means the previous blood tension in the arteries is not only restored but even exceeded. At this stage we have a very high arterial tension combined with a watery condition of the blood, and it is then, according to Beau, that the so-called anæmic murmur is developed in veins and arteries. Moreover, this murmur lasts only as long as the blood tension remains high. If the tension be suddenly lowered by another hæmorrhage the murmur immediately disappears, and does not return until the condition of spanæmia or serous polyæmia, as Beau terms it, is restored by renewed absorption.

Besides this spanæmia and high arterial tension Beau found that the heart was hypertrophied and actually weighed more as a result of repeated hæmorrhages. Now the condition of the blood and arterial tension in chlorosis is very similar to that of the animals which were bled. Wunderlich, as far back as 1856, and Friedreich in 1867, described the chlorotic heart as dilated. Beau, Bamberger, and Stark, however, claim that the chlorotic heart is *hypertrophied* as well as dilated, and Heitler in a recent investigation speaks of the *dilated hypertrophy* of a chlorotic heart. Moreover, the second sound of the chlorotic heart is usually accentuated, which indicates high tension in the pulmonary artery, and therefore the evidence seems conclusive that the condition of chlorosis resembles the high tension and serous polyæmia of the animals experimented upon, and the murmur is attributed to the high tension of this attenuated blood.

In advanced stages of chlorosis we may have murmurs at the apex as well as at the base of the heart, but these will be spoken of in connection with the so-called dynamic murmurs.

To sum up our story, then, we find that experiments and clinical observation seem to harmonize in the following respects:—

- (1.) Local constrictions in a tube favor the production of murmurs in fluids flowing through them by causing eddies and molecular friction.
- (2.) The molecular friction of a fluid is greater and more productive of audible murmurs according as (a.) the velocity is greater, (b.) the density is diminished, (c.) the tension is increased.

Allowing that blood vibrations are capable of causing sounds, as I think we must allow from the evidence

given, the question naturally arises as to the participation of the vascular walls in the production or modification of the sounds which we hear. There are those who maintain that the sounds are due to the vibration of the walls themselves. Such views appear to me untenable, however, although I do believe that the vibrations of the blood may be and probably are materially modified by the walls which transmit them outward.

We never speak of the telephone as producing the sound waves which we listen to during an electrical conversation, but we do recognize that the vibrations which are peculiar to the transmitter do modify the conveyed speech, because we could instantly tell in the darkest room whether a person were talking to us through a telephone or through an ordinary speaking tube, for instance. Moreover, some transmitters are good and some are bad. Some are so bad that no voice comes through, and the degrees of efficiency depend upon the ability of the tympanum to take up and convey the vocal vibrations without destroying their rhythm.

In a similar manner I assume that the matter of our hearing the blood murmurs depends in a great measure upon the capacity of the arterial walls to vibrate in unison with the blood itself. Just how much or how little they contribute to the sound itself will probably remain a doubtful question for some time to come.

APEX MURMURS.

Dynamic Murmurs. The group of functional murmurs heard at the apex have been termed dynamic murmurs because they are supposed to be due to some temporary lack of cardiac force or to an irregular application of that force. The murmur which is often heard in chorea is taken as the type of this class, and in advanced stages of chlorosis there may be apex as well as basic murmurs. Many of these murmurs are temporary and disappear with the restoration of general health. Bristowe, however, reports cases in which there were clinical proofs of mitral incompetence, including pulmonary apoplexy, anasarca, and nutmeg liver, and yet at the autopsy the mitral valve and the orifice it protects were found to present a perfectly healthy appearance. Several cases are also referred to by Bristowe where he thinks the murmur was due to tricuspid regurgitation, but he adds: "It may almost be regarded as an axiom in medicine that the presence of a systolic murmur at the apex is a positive proof of regurgitation through the mitral orifice."

Under the head of dynamic murmurs, therefore, we have a wide group of phenomena extending from a simple temporary whiff without any obvious organic disturbance to a series of most disastrous casualties in lungs, liver, and kidneys. Balfour asserts, indeed, that a dynamic regurgitation produces the same results as an organic regurgitation if it persists long enough. It is obvious, also, that we have but two decisive means for differentiating between a dynamic and an organic murmur. If a murmur develops during any prostrating disease but ceases on the restoration of health it is declared to be dynamic. Should it persist, however, and develop sequelæ, the autopsy alone will distinguish it from a case of valvular destruction.

Stokes and Gairdner considered dilatation of the heart a frequent cause of an apex murmur, while Parrot believed the dynamic murmur to be always due to tricuspid regurgitation.

Eichhorst thinks many murmurs are due to innervation disturbances which render the closure of the valves irregular, and he adds that cases of relative valvular insufficiency soon lead to hypertrophy of the heart if they are not cured.

Walshe thought the choreic murmur was due to a sort of choreic, spasmodic action of the muscoli papillares, but it seems hardly probable that such a spasmodic action of these muscles would be so rhythmical as the choreic murmur is.

Bristowe offers the following conditions as explanations of an apex murmur with mitral orifice of normal size:—

(1.) Presence of coagula which form just prior to death.

(2.) Dilatation of the auriculo-ventricular opening.

(3.) Disproportion between the size of the ventricular cavities and the length of the chordæ tendinæ and muscoli papillares.

(4.) Lateral displacement of the origins of the muscoli papillares in consequence of the rounded form which dilatation imparts to the heart.

(5.) King's safety-valve action of the tricuspid. When the blood tension becomes high the tricuspids will often leak, and thus take off from the lungs a portion of the high-pressure strain.

The theory of temporary dilatation of the mitral orifice, combined with a parietal debility of the left ventricle (Hayden), has received quite general support, and has recently been presented in a somewhat new form by Donald McAllister, who bases his conclusions upon some experiments of Ludwig and Hesse regarding the movements of the heart. Ludwig and Hesse succeeded, by an ingenious method, in obtaining plaster casts of the heart during complete systole and again during diastole. By comparing these casts two points are noticeable: first, the heart shortens but little if any during systole; second, the transverse axis at the base of the ventricles is diminished nearly one half during systole. This means that during contraction of the heart the transverse area of the base of the ventricles becomes only a little more than one half its size in diastole. Now this diminution of area falls in the plane of the auriculo-ventricular orifices, and consequently the size of these orifices being actually reduced nearly one half during systole, the valve curtains are able to fill them up and prevent regurgitation. Supposing, however, that the cardiac muscles are weak, or the blood tension is very high, so that the orifices named are imperfectly contracted, then the valves will prove insufficient and regurgitation will result. This regurgitation is not due to a dilatation of the orifice beyond its normal anatomical limits, but to an incompetent contraction during systole, and thus at post mortem the orifice and valves appear perfect.

—The *Medical Times and Gazette* says that the adulteration of food has not escaped attention by the authorities even in Spain, and mentions the following original method of one Spanish magistrate in dealing with sophisticated articles: "All articles," runs a proclamation, "in the shape of wines, groceries, and provisions, which upon examination and analysis are proved to be injurious to health, will be confiscated forthwith and distributed to the different charitable institutions."

THE DIAGNOSIS OF THE SO-CALLED "FUNCTIONAL MURMURS."¹

BY F. C. SHATTUCK, M. D.

IN the second edition of his great work on diseases of the chest, in discussing the cause of cardiac and arterial murmurs, Laennec speaks as follows: "I have known a considerable number of persons die of different diseases, acute or chronic, who had presented this phenomenon (murmur) very distinctly during the latter part of their life, sometimes during several months, as well in the heart as in different arteries, and upon the examination of whose bodies I could discover no organic lesion coinciding constantly with these phenomena, and which are not frequently met with in subjects who had never exhibited anything of the kind during life. In the first edition of this work I considered the bellows-sound of the heart as an indication of the contraction of the orifices. No doubt it exists almost always in this case, but since the first publication of my treatise I have very frequently met with it in individuals who had no lesion of the sort, while on the other hand I have seen ossifications of the valves which were not attended by this sound. . . . In like manner I can state with certainty that the bellows-sound of the heart is very often met with when this organ is perfectly healthy."²

Laennec thus recognized the fact that a murmur is not sufficient evidence on which to base a diagnosis of organic change in the heart or its valves, and, in view of his premature death, it is not to be wondered at that he could but very imperfectly practically apply the fact to the clinical distinction between murmurs which are serious and those which are not. "The sole disorder," he says, "which has appeared to me constantly, or almost constantly, to accompany the bellows-sound is a state of nervous agitation more or less marked;"³ he also noticed that a murmur is produced over an artery when pressure was exerted upon it by the finger or stethoscope, though he failed to see that the pressure is the direct cause of the murmur, but attributes all these murmurs to spasm of the heart or arteries.

Very few of the modern writers on cardiac disease and the physical exploration of the chest with whose works I am acquainted seem to me to be sufficiently explicit in the directions which they give for making this practical distinction, the great importance of which is obvious.

Valvular disease involves more or less disability for life, a disability varying in degree with the character and extent of the disease, the age of the patient, the completeness of the compensation, and last, though, perhaps, not least, the ability and willingness of the patient to avoid overtaxing his heart in any way, and at the same time shun causes of anæmia and debility, which tend to produce relaxation and dilatation of the cardiac walls, and thus impair the compensation.

A person who is so situated that he can live on a level with his heart may perfectly well reach advanced old age, although the valves are somewhat damaged and no life company will insure him. But economy he must practice, having no longer the surplus heart power which belonged to him while the organ was

still structurally unimpaired. Moreover, no sooner does a patient learn that there is trouble with his heart than visions of sudden death are only too apt to rise before him. He often sees in the newspapers paragraphs announcing that some one has expired suddenly in the street, at his place of business, in a public conveyance, and that the "death is attributed to heart disease." In no other class of affections does the sword appear to the public eye suspended by so slender a thread. The profession holds much sounder views as to the compatibility of organic lesions of the valves with longevity than it did formerly, and in time these views will filter down to the general public. But meanwhile it behooves us to be very careful not to be guilty of the disservice of allowing persons with murmurs, but sound hearts nevertheless, to think themselves the subjects of valvular disease.

Dealing with this subject from an exclusively clinical point of view I would include all cardiac murmurs in two grand divisions:—

I. Those dependent on organic and permanent changes, especially in the valves of the heart, commonly called "organic" murmurs.

II. Those not so dependent, and commonly called "functional" or "inorganic" murmurs.

The vexed and very interesting question of the mechanism of this second class of murmurs does not come within the scope of my paper, so I pass on to the conditions under which they occur.

These "functional" or non-serious murmurs are met with

- (1.) In anæmia.
- (2.) In adynamic fevers and chorea.
- (3.) Connected in some way with respiration, the pseudo or respiratory murmurs.
- (4.) Mitral definite connection of any kind.

(1.) The anæmic murmurs, as their name indicates, are associated with an impoverished condition of the blood from any cause. They are systolic in time, are heard chiefly at the base, and then usually to the left of the sternum in the pulmonic area, though they may also be heard, but with diminished intensity, at the apex. They are apt to be accompanied by venous hum in the veins of the neck, and are said to be louder in the recumbent than in the erect posture.

(2.) In fevers of any kind attended by severe prostration, and also in chorea, a systolic murmur is often developed about the heart; this murmur is, as a rule, loudest at the apex, and is sometimes heard only at or in the immediate neighborhood of that region.

(3.) The respiratory or pseudo murmurs may be heard in any portion of the cardiac area, are nearly always systolic in time, and disappear or are greatly modified in character when the breath is held, sometimes at the end of inspiration, sometimes of expiration. Most of them seem to depend on the effect of the cardiac movement on the air contained in thin-walled pulmonary cavities bordering on the heart, or on solidification or retraction of that portion of lung which normally overlies or touches the heart, but they sometimes occur when no change in the pulmonary tissue can be surely detected, at least during life. They are analogous to the subclavian systolic whiff so often heard as well in individuals who are apparently healthy as in those suffering from infiltration of or pleurisy about the apex of the lung.

- (4.) One meets with some murmurs at the apex, as

¹ Read before the Suffolk District Medical Society, April 28, 1883.

² Forbes' Translation, page 558. London: Underwood. 1837.

³ Page 560.

well as at the base, unassociated with anæmia, chorea, fever, accentuation of the pulmonic second sound, phases of the respiratory process, changes in the lungs, or any previous history of rheumatism, which, from the practical point of view of prognosis and treatment, I class as functional, for the reason that months after they were first observed they remain the sole evidence of any inadequacy of the heart for its work.

For this classification I do not claim absolute completeness, but think that it will be found to include all the non-serious cardiac murmurs which are not extremely rare.

We now come to the clinical distinction between these murmurs and those which are serious, organic, incurable, and involve disability.

This distinction involves their consideration

- (a) As to rhythm.
- (b) As to associated conditions.
- (c) As to persistency.
- (d) As to time of propagation.
- (e) As to enlargement of the heart.

(a.) Functional murmurs are almost always systolic in time. Some authorities allow no qualification, but later writers are more cautious, and rightly so in view of the three cases, with autopsies, reported by Weiss,¹ who also alludes to a few observed by others. A practical deduction is that diastolic murmurs are almost always invariably organic.

(b.) The association of anæmia, adynamic fever, chorea, and phases of the respiratory process or lung changes require merely mention.

(c.) The murmurs belonging to the above conditions are not persistent except occasionally that of chorea. In anæmia and fever the murmurs disappear with the restoration of the general health, and the pseudo murmurs are characterized by their dependence on respiration or changes in the lungs. Organic murmurs may, it is true, disappear for a time from feebleness in the power of the cardiac contraction, or other cause, but their sequence, enlargement of the heart, does not disappear with them.

(d.) Functional murmurs have no definite line of propagation, the basic into the carotids, as in aortic obstruction, the apical toward the axilla or round to the back, as in mitral regurgitation. They are pretty closely limited to the cardiac area, and are very rarely, if ever, to be heard at the lower angle of the scapula. It must, however, be confessed that the mere loudness of a murmur is no safe index of its gravity.

(e.) We now come to the point of all others the most important, that, namely, of enlargement of the heart. Whenever obstruction or regurgitation at an orifice is in the least marked or has lasted a little time the normal balance of the circulation is disturbed and can be restored only in one way, by an increase in the size and power of the heart, such increase predominating in that portion of the organ on which the bulk of the extra work is thrown. This is what is meant by compensation. Thus, in aortic disease, the extra work being primarily thrown on the left ventricle this must increase in size and power to compensate the lesion; in mitral disease the heightened resistance in the pulmonary circuit involves like changes in the right ventricle. If compensation is not established the heart must soon fail; if it is established the sole means is through enlargement, in which hypertrophy predominates over dilatation, and this enlargement must, generally speak-

ing, be directly proportional to the extent of the lesion. Thus in either case we are not left long in doubt. Here, it seems to me, lies the kernel of the whole question. Whether regurgitation through the mitral orifice is the true cause of the murmurs of anæmia and the adynamic fevers as well as of any and every systolic souffle at the apex of the heart; whether this regurgitation be due to relaxation of the heart alone, as is maintained by McAlister, or to relaxation and a slight degree of enlargement, as is maintained by Balfour, these questions are of no material importance from a purely clinical standpoint, though of course from the points of view of physiology and pathology they are highly important and most interesting.

As regards prognosis and treatment a murmur, even if persistent, is of no importance to the patient unless it either is or, after a reasonable time, say six months if you choose, becomes associated with other well-marked evidences of a disturbance of the balance of the circulation, above all enlargement of the heart in some or all of its divisions.

But it is necessary to say one word more on this matter of enlargement. There seems to be little or no room for doubt that in anæmia and fevers of some severity or duration a certain relaxation of the cardiac muscle results from the impaired nutrition, and that in consequence of this the heart becomes somewhat dilated and therefore enlarged. It is, however, my belief that this enlargement is rarely sufficient to be manifested by physical signs indicating that condition. In anæmia the second pulmonic sound also is apt to be accentuated, but the very existence of the anæmia will prevent us from attaching too much importance to that fact, which, in the absence of such a condition, and provided always that the accentuation is real and not simply apparent, the aortic second being weakened or the lung tissue about the pulmonary artery being condensed or retracted, should always put us on our guard as to the presence of mischief.

It should be added, in passing, that a person, notably a young girl with menstrual irregularity, may be anæmic although the cheeks are flushed and the lips of a deep red. The pale, large, and indented tongue and the clammy hands and feet tell the true story.

Balfour finds the murmur of anæmia as a rule loudest an inch and a half to the left of the sternal border in the second interspace, over the seat of the left auricle. Since I became acquainted with his writings I have examined many cases with reference to this point, and my experience coincides with the almost universal teaching that the point of maximum intensity is usually just to the left of the sternum in the second interspace or over the third left costal cartilage.

To sum up. The true cause of cardiac murmurs, especially those ordinarily called "functional," not being fully understood, for practical purposes we need a practical classification. Clinically, then, we may divide murmurs broadly into the serious and non-serious, terms which do not especially please me, and which I am ready to abandon at any moment for others more descriptive and equally concise. Even if we include in the latter group some murmurs which are truly organic it seems to me that we do no harm, inasmuch as an injury to a valve which is so slight as to be followed by no other evidence of disturbance of the circulation after the lapse of six months or a year cannot be of any consequence.

¹ Wiener Wochenschrift, 1880, pages 137 and 160.

The differential diagnosis may be tabulated thus :—

THE SERIOUS MURMURS	THE NON-SERIOUS MURMURS
Occur at any time in the cardiac revolution.	Are systolic in time.
Are apt to be associated with rheumatism or its history.	Are usually associated with anæmia, fevers, chorea, or respiration.
Have definite lines of propagation.	Have no definite line of propagation.
Are persistent.	Are usually transitory.
Involve well-marked enlargement of the heart.	Involve no marked enlargement of the heart.

A NEW INTERPRETATION OF FLINT'S MITRAL DIRECT OR PRESYSTOLIC MURMUR WITHOUT MITRAL LESIONS.¹

BY A. T. KEYT, M. D., CINCINNATI, OHIO.

FLINT describes an interesting auscultatory phenomenon, namely, the occurrence of a cardiac murmur preceding and running into the first sound without mitral lesions, but always in association with considerable aortic insufficiency. He speaks of the murmur as *blubbery* in quality, best heard within the apex, and characterizes it as a *presystolic* or *mitral direct murmur*.

Although this murmur, it appears, has been recognized and pointed out alone by Flint, the correctness of the observation is not to be questioned. Discussion, however, is allowable regarding its interpretation and mechanism of production.

As just stated, our distinguished master refers the murmur to the mitral orifice, and terms it *presystolic*. The following is his explanation: "The left ventricle is filled with blood from the current passing from the auricle to the ventricle through an unobstructed orifice by gravitation, and, in addition, the regurgitant current from the aorta. As a consequence the mitral curtains are floated away from the ventricular walls and are not only approximated but in actual contact. These conditions existing, the auricle contracts and forces an additional quantity of blood into the ventricle. The mitral direct current passes between the valvular curtains which are in apposition, and throws them into vibration." Is the explanation sufficient? It would seem the segments would not arrange themselves in apposition because to do so would require a superior pressure on the ventricular side and the creation of a retrograde current towards the auricle. The fact is that during ventricular diastole the current is towards the ventricle, or possibly at a stand-still in the last moment before the occurrence of auricular systole. It is not conceivable that a retrograde current in the mean time could be established to close the segments, and from the first moment of auricular contraction the direct current would keep them well open. The experiment of injecting water through the mitral orifice into the ventricle, and proving that the valve becomes closed, succeeds only because a brisk retrograde current carries the curtains into apposition. The conditions are not analogous to those of the living mechanism.

But even if we could conceive of the valve as closed in the manner assumed the conditions would not yet be present for the production of a *presystolic*

murmur. The curtains would be limp and passive and awayed noiselessly apart as the blood under the auricular systole passed between them into the ventricle. They would lack the requisite tension or stamina to permit of their being thrown into sonorous vibrations by the action of the passing current.

For these reasons the theory offered by Flint does not appear to us adequate to explain the phenomenon of a cardiac murmur before the first sound in aortic insufficiency without lesion of the mitral valve.

We will now proceed to give what we conceive to be the true explanation.

In normal cardiac action the first sound of the heart is heard a notable time after the beginning of ventricular systole. This is readily demonstrated by employing a cardiograph and stethoscope at the same time and giving attention to the play of the lever and sounds of the heart. It will be observed that the lever has nearly or quite completed its ascent when the first sound impresses the ear. The time of this ascent marks the interval between the beginning of ventricular systole and event of the first sound. The interval is measurable and may be stated roundly at about one fifteenth ($\frac{1}{15}$) of a second, which is long enough for a practiced ear to appreciate.

Now, when the valves are perfect, the blood begins to escape from the ventricle through the aortic orifice about the time of culmination of the first sound, and a murmur generated at the aortic orifice would be heard with and following the first sound. This murmur would be counted, and truly, strictly systolic. But when the aortic valves are permanently open the blood would begin to flow through them immediately upon the beginning of ventricular contraction: the consequence would be the generation of a murmur which would begin before and run into the first sound. This murmur, though also in reality strictly systolic, would strike the ear as occurring before the beginning of systole because antedating the first sound of the heart.

Ventricular systole is an event which measures on an average .326 of a second, while the first sound of the heart, as appreciated by the ear, is of momentary duration. The first sound divides systole into a short anterior and longer posterior portion. The distinction here stated is not found in any of our classical works on the heart; nor have any of our distinguished auscultators, so far as known, recognized a chronometric difference between the beginning of systole and the first sound of the heart. Without this recognition a systolic murmur beginning before the first sound would of necessity be referred to the mitral orifice and distinguished as a mitral direct murmur. With this recognition opportunity is given for the localization of such murmur at the aortic orifice, and distinguishing it as an aortic direct murmur.

That the blood begins to flow through the aortic orifice in aortic insufficiency immediately upon the beginning of ventricular contraction, instead of after a notable interval, as when the valves are intact, has been distinctly demonstrated by the simultaneous graphic method. It has been determined that while in normal conditions the carotid pulse follows the systole of the ventricle at an interval of one twelfth second, in aortic insufficiency the interval may not be more than one thirty-second second.

If the scope of this article permitted we could produce here simultaneous traces, from both man and the schema, in demonstration of this interval when the

¹ American Journal of the Medical Sciences, July, 1862. The same, April, 1882. The London Lancet, American edition, April, 1883.

aortic valves are competent, and of its obliteration when they are open.

Under the cardiac conditions named all is favorable for the development and definition of systolic aortic murmur in antecedence of the first sound. The enlarged ventricle and hypertrophied walls would suddenly start a volume of blood through the altered orifice, engendering vibrations, while the closure of the expanded mitral valve would give smartness to the first sound, and so materially aid the differentiation of the latter from the murmur already in progress.

Evidently the "blubbery" quality attributed to this murmur could be produced at the aortic as well as at the mitral orifice; and it is not unusual for an aortic murmur to be well heard at or within the apex. In the cases cited by Flint, in the first, "at the apex was a presystolic blubbery murmur. At the base of the heart was an aortic regurgitant murmur which was diffused over nearly the whole præcordia." In the second case was found "an aortic direct and an aortic regurgitant murmur, both murmurs being well marked. There was also a distinct presystolic murmur within the apex, having the blubbery character." In a third case, recently reported, were four murmurs referable to the left side of the heart without mitral lesions. "The patient in this case had undoubtedly both a mitral systolic and a mitral presystolic murmur." In such a medley of sounds we appeal if it would be possible even for our author to decide that the murmur in question proceeded from the mitral orifice, independent of the preconception, that a murmur prior to the first sound is presystolic and necessarily mitral direct.

Other authorities, while accepting the soft presystolic murmur as signaling when present mitral obstructive lesion, do not admit the existence of a rough presystolic murmur under any conditions. The murmur under consideration they time as systolic. Flint likewise formerly considered it systolic. This goes to show how close must be this murmur to the first cardiac sound,—so close, indeed, that the superior and long cultivated ear of Flint was required to first signal the distinction. A true presystolic or auricular systolic murmur precedes the first sound sufficiently long to be recognized as such without difficulty. It is true that it is more liable to be counted diastolic than systolic.

And yet, now that the distinction has been pointed out, we conceive it would not be difficult for the trained and attentive ear to appreciate this initial systolic murmur as precedent to the first sound. The contrast in the note of the murmur and note of the sound would help the discrimination. And we know that reduplication of the cardiac sounds is well perceived, although here two similar notes must be as near, at least, as the dissimilar notes of the murmur and sound under consideration.

Then accepting the fact as set forth, that a cardiac murmur preceding the first sound may be audible in certain cases with healthy mitral but insufficient aortic valves, our explanation of the phenomenon is, that the murmur is systolic and produced at the aortic orifice, and begins before the culmination of the first sound because the blood is already flowing through the altered valves, throwing them into vibration, when the heart note is heard.

The discovery and appreciation of the phenomenon by our illustrious author was a very natural result in view of his large clinical experience, and exquisite aus-

cultatory powers, and the extreme care with which he investigates his cases. His interpretation was framed on the basis of the idea that the murmur was essentially mitral direct, and without reference to the positive results bearing upon the mechanism furnished by the graphic method. These results are too definite and significant to be neglected or ignored; and if we have succeeded in arriving at the true interpretation it is because we have studied the question in the light of the results of cardio-sphygmography.

As a term is needed to designate this murmur, let it be named the *Murmur of Flint*.

SOME OBSERVATIONS ON THE SALIVARY DIGESTION OF STARCH BY INFANTS.¹

BY J. M. KEATING, M. D.,

Visiting Obstetrician to the Philadelphia Hospital, and Lecturer on Diseases of Women and Children.

RECENTLY, in a late English work, I find the following: "During the first few months farinaceous food of every kind should be avoided, for the child's stomach (?) cannot digest it. Until the third month, or even later, no saliva is secreted, and without this floury foods cannot be assimilated."² This idea is so prevalent, and most of us have adopted the statement as representing the teaching of physiologists, that it has always been a matter of surprise to those interested in the feeding of infants to find occasionally, especially amongst the poorer classes, infants fed upon corn starch or other farina, almost to the exclusion of other food, and thrive.

At present we presume that amylaceous material has of necessity to be converted by hydration into glucose, and for this reason I will not detain you this evening by indulging in the more speculative aspect of this subject, as to whether dextrine is capable of being absorbed, and which of the two ferments, that of the salivary glands or of the pancreas, is of the most importance. We have left this matter for further investigation. Prof. Albert R. Leeds, in his very able *exposé* of the subject of foods as regards their chemical constituents, made the matter so clear that in his table of the analyses we have evidently an accurate guide for the selection of foods in individual cases. But as the general belief is that for infants of a tender age our choice should fall on that which contains a minimum quantity of starch, and a maximum amount of vegetable albuminoids, or foods based on the Liebig formula, I deemed it valuable to institute a series of experiments, the result of which I confess were rather surprising, to test the saliva of infants, and to satisfy myself that the reason why some children apparently thrive on starchy food is not due to any change in the starch in its preparation, but depended upon contact with secretions well established in childhood.

In these tests we endeavored, as far as possible, to exclude all error. Corn starch was used, it having been previously boiled, cooled into a paste, and portions of this was put into little linen bags, and given to infants to suck for two minutes at a time. Pavy's test was then used; the corn-starch paste exhibited before the experiment no evidence of sugar change.

¹ Read before the College of Physicians of Philadelphia, June 8, 1883.

² Management of Infants, etc., by Howard Barrett.

the contents of the stools, and I submit the accompanying report.

	Age	Food	Reaction.	No. of Experiments.
	0	Breast.	None.	3
	0	Breast.	Marked.	1
	0	Breast.	Well marked.	2
	0	Breast.	Marked.	1
	0	Breast.	?	1
	0	Breast and crackers.	Well marked.	3
4 weeks.	0	Bottle.	Perceptible.	2
4 weeks.	0	Breast.	Marked.	2
4 weeks.	0	Breast.	Marked.	1
4 weeks.	0	Breast.	Very slight.	2
4 weeks.	0	Breast.	Marked.	1
4 weeks.	0	Breast.	Very marked.	1
7 weeks.	0	Breast.	Very slight.	2
2 months.	1	Breast.	Marked.	2
2 months.	0	Breast.	Very marked.	1
2 months.	0	Breast.	Marked.	1
4 months.	2	Corn-starch and crackers.	Well marked.	2
5 months.	1	Corn-starch and crackers.	Slight.	3
6 months.	2	Breast and crackers.	Marked.	1
13 months.	4	Corn-starch and crackers.	Well marked.	1
17 months.		Condensed milk.	None.	

To the resident physicians of the Philadelphia Hospital, Drs. B. F. Hawley and A. E. Roussel, I am indebted for assistance in this matter, as many of these tests were repeated a number of times by them, and great care was used to insure accuracy. My report includes the results obtained by experiments with the saliva of twenty-one children, varying in age from six days to seventeen months. The sugar change was noted in all but three,—one of these was a babe six days old,—whilst in another babe seven days old a marked reaction was observed. I feel satisfied that some infants do digest starch provided it is presented to them in a digestible form, and also that the salivary secretion, which occurs earlier than we have been accustomed to believe, is allowed to come in contact with it, and I cannot but attribute the many statements to the effect that starchy food in small quantities is contra-indicated to the fact that the secretions of the mouth are less liable to exert their influence when such food is administered by bottle and deposited in a surprisingly short time in the acid juices of the stomach. If starchy food, such as barley flour, oatmeal, rice, wheat flour, etc., is indicated on account of its highly nutritious qualities which exist in all portions of the grain and deemed advisable in the feeding of children, our few observations teach us that they should be administered in such a way as to insure their thorough digestion, and I am satisfied that the surprising results we witness, especially among the poor, of thriving table-fed babes, is due to the mode of feeding more than to the fact that they are exceptional and astonishing cases. My table shows that the age of the infant is not a guide to the quality of its saliva, and we should bear this in mind when choosing the form of food. Thus, should we be called upon to regulate an infant's feeding, it would be important for us to test the saliva.

If we find a sugar change taking place we might

incorporate with milk small quantities of one of the cereals, either barley, oatmeal, or wheat. On the contrary, should the test prove negative, Horlick's or Mellin's food would be decidedly preferable. But while thoroughly convinced that the saliva is a most important element in digestion we cannot overlook the fact that starchy foods have also to run the gauntlet of the pancreas, which organ, if it possess in childhood relatively the same power that it does in latter years, is far more active than the salivary glands. We cannot, then, overlook the value of a microscopic examination of the stools of all bottle-fed children, for I believe that by this alone we can regulate the quantity of farinaceous food, detecting the proportion of the undigested residue.

The following are my conclusions:—

The saliva of some infants possesses the property of converting starch into glucose, regardless of age.

The age of the infants cannot be taken as an indication of this property of its saliva.

When such a condition is found to exist a small quantity of well-prepared farinaceous food is valuable as an element in the diet, incorporated with mixed cow's milk.

An examination of the stools of children so fed would be a guide as to the quantity of starchy food to be used, and when farinaceous food is employed slow feeding is probably preferable to the bottle.

REPORT ON OBSTETRICS.

BY WILLIAM L. RICHARDSON, M. D.

PUERPERAL UTERINE ATROPHY.

DR. R. FROMMEL reports¹ twenty-eight cases of this rare result of the puerperal condition. The youngest case was nineteen years of age, and the oldest forty. Besides the uterine atrophy there was in most of the cases a general atrophy of the generative organs. According to the observations of Schröder there are three distinct varieties. One occurs early in the puerperal stage, and is especially liable to be found in patients suffering from tuberculosis, and also in those who have had puerperal septicæmia; another form occurs in women who are in a poorly nourished condition, although their labor and convalescence were normal; and still another variety is found in women who have well-marked puerperal disease. The symptoms which accompany this affection are amenorrhœa, fugitive pains, and many symptoms which would naturally be complained of by a patient suffering from hysteria. There is found on examination a state of vaginal subinvolution and a consequent tendency to prolapse. The uterine walls are thin; the uterus is generally atrophied, and there is less mobility. The disease is more frequently found in hospital than in private practice. Dr. Frommel found that the disease was most apt to come on in women who had become pregnant soon after marriage, had nursed their children, and had during the nursing become pregnant. He explains its occurrence by the fact that the generative organs seem to be exhausted, and, as a result, there is a long interval before the catamenia reappear, if at all. The prognosis in these cases is bad, and it frequently happens that the uterine and ovarian func-

¹ Zeitschrift f. Geb. v. Gyn., vii., 2.

tions are never restored. The treatment, of course, is tonic, and the adoption of measures to improve the general nutrition of the patient.

NITROUS OXIDE AS AN ANÆSTHETIC.

Dr. Tittel has administered nitrous oxide in fifty cases of labor. He finds¹ that under its influence the uterine contractions are increased in severity and become more frequent. The pulse of the mother is perceptibly lessened in frequency, while that of the child is decidedly increased. He thinks it of great advantage during the first stage in a primipara who is suffering severely, and also in cases of multiparæ when the pains occur at long intervals and are of slight severity. In four cases the patient was greatly relieved of a distressing nausea and vomiting. The nervous excitement, sometimes observed when nitrous oxide is used, was noticed in only two patients. One of these had a well marked hysterical attack, and the other epileptiform convulsions.

PUERPERAL DIABETES.

Dr. J. Matthews Duncan contributes a most valuable paper² on this very rare disease. In it he gives histories comprising twenty-two pregnancies in fifteen women, varying in age from twenty-one to thirty-eight years of age. So far as is known all, with one exception, were multiparæ. Of the twenty-two pregnancies in fifteen mothers four ended fatally after delivery. Hydramnios was frequent, and the liquor amnii in one case contained 0.7 per cent. of sugar, and in a second case there was also unquestionably sugar in the liquor amnii, although no quantitative examination was made. In seven of nineteen pregnancies, in fourteen mothers, the child died during the pregnancy, having in all of these reached a viable age. In two more the child was feeble, and died a few hours after birth. In one other case the child had diabetes. The dead fœtus was very large in many of the cases.

Dr. Duncan admits that the number of cases which he has been able to find is too small to possess any very great statistical value, but the histories seem to show—

- (1.) Diabetes may come on during pregnancy.
- (2.) Diabetes may occur only during pregnancy, being absent at other times.
- (3.) Diabetes may cease with the termination of pregnancy, recurring some time afterwards.
- (4.) Diabetes may come on soon after parturition.
- (5.) Diabetes may not return in a pregnancy occurring after its cure.
- (6.) Pregnancy may occur during diabetes.
- (7.) Pregnancy and parturition may be apparently unaffected in its healthy progress by diabetes.
- (8.) Pregnancy is very liable to be interrupted in its course, and probably always by the death of the fœtus.

PUERPERAL ECLAMPSIA.

Dr. Karl Breus reports³ six cases in which the patient was treated by diaphoresis. One patient, whose puerperal condition was complicated with cirrhosis of the liver, died, the other five recovered. The patient is placed in a bath at a temperature of 100.4° F., the head only being kept above the surface of the water.

¹ Wiener Med. Blätter, March 15, 1883.

² Transactions of the Obstetrical Society of London, vol. xxiv., p. 256.

³ Archiv für Gynäkologie, vol. xix., p. 11.

The temperature of the bath is then gradually raised as high as the patient can bear it. This is continued for about half an hour or until a profuse sweating appears on the head and face. The patient is then packed in a sheet, and covered with several blankets. The diaphoresis is continued for three or four hours. The patient meanwhile is encouraged to drink freely of soda water. Should eclamptic symptoms reappear the bath is again resorted to. At the same time an enemata of hydrate of chloral is given. In the first two cases Dr. Breus reported the convulsions occurred before delivery. In one case the attack came on at full term, and in the other at the sixth month. Soon after the bath was used the convulsions ceased, and both patients subsequently were delivered of living children. In the third case the convulsions occurred before the labor was completed, and continued after the delivery. In the fourth case the labor was nearly completed before the eclamptic seizure. Both of these patients made a good recovery, as did also the sixth, in whom the convulsions first occurred on the twenty-third day after delivery.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

APRIL 28, 1883. Annual meeting. Dr. R. M. HODGES in the chair.

Dr. B. JOY JEFFRIES presented a communication entitled

THE QUICKEST, SUREST, AND MOST PRACTICAL METHOD OF ASCERTAINING DEFECTS IN THE CHROMATIC SENSE.

This, he said, was most undoubtedly Holmgren's with the worsteds, which, with its various imitations introduced by others, was exhibited and explained. It had become necessary to again call the attention of the profession to this method, since the papers have been constantly filled with false and silly statements about it, introduced by persons interested in attempting to prevent examinations for, and control of, defective vision on the railroads. So many members of the Society had, from conversation, also shown such a mistaken notion of the test that it must be again asserted that no names of colors are asked for by the examiner. The particular shade of green used for the first test corresponds to where in the spectrum the color-blind begin to lose the color and see only gray. The special value of the test was the very fact that the examined might be perfectly ignorant of color and color names, yet his chromatic sense could be determined by an expert with certainty and very quickly. Of course tests by railroad officials and employees, directed by the superintendents to examine and sign certificates, were worse than useless. They never have applied the test properly, and are wholly incapable of so doing. Thus ignorantly asking the names of the colors has given rise to the idea that it was a part of the test, and hence the sympathy excited for employees required "to be as versed as milliners," etc. Of course railroad officials and employees who desire to prevent examinations and the counsel they hire will persevere in their false statements as to the test which members of the

Society have seemingly come to believe as facts. Hence the need of explanation.

Dr. Jeffries also explained the absurdity of attempting to restrict, as was proposed in the legislative bill, the testing for color-blindness to the railroad signals, and showed that it was this year, as before, but a plausible attempt to do away with all examinations. The present law defines no method of testing, or any standard of requirement. The biennial examinations which were recommended to be and were dropped out had not been inserted by Dr. Jeffries, but by the railroad commissioners, who even advised annual ones in their report. The law as at present is hardly more than a recognition of the rights of the community, without any attempt at securing those rights. This can only be done by the legal enactment of standard methods and requirements, and the appointment of State experts thoroughly competent to decide *simply* whether an employee came up to such standard, and whose fee for the same is fixed, to be paid by the corporation, not the employee. The necessity for all this was very practically explained.

The speaker then showed how all officials had been deceived in attempting to test men declared defective. Whenever employees had been by *competent experts* declared color-blind, tests with flags and lanterns but confirmed this, when *properly and honestly carried out*.

Dr. Jeffries very specially dwelt upon the fact that learning to become an expert examiner was a matter of time, study, and practice, quoting the London Committee's report on this. Physicians could learn better than others. The surgeons of the marine hospital service had made few mistakes even at first in testing pilots.

As with the visual power so with the color sense, the amount to be required should vary with the position of the employee, hence the necessity of determining this with accuracy. The apparatus for doing this by experts was described, particularly Donder's and Holmgren's.

Dr. Jeffries related the cases of a number of the color-blind he had examined among railroad employees and pilots, and most practically showed how dangerous they were. Thanks were due to Holmgren for giving us a method so quickly carried out, so sure and so scientific that no excuse could be made for the employment of any one on land or sea whose chromatic defect endangered our lives or property. On the sea it was an international question, for the settlement of which a commission was necessary such as the speaker has been striving for some years to have established, and which must of course come in due time.

Dr. E. M. BUCKINGHAM asked if color-blindness was ever acquired in adult life.

Dr. JEFFRIES replied no, except as the result of some disease of the eye or brain, which in itself would most probably preclude the persons' employment on a railroad, and therefore he thought the requirements of biennial examinations superfluous as far as defective chromatic sense was concerned. But every employee who had been sick from fever, etc., or had been injured, should be retested as to color, and more especially as to his visual power. He cited several instances of employees who had been his patients, and whom no law prevented from returning to duty with most dangerous loss of eyesight, the road being protected by a certificate given by another

employee, perhaps years before, that his visual power was perfect.

Dr. C. H. WILLIAMS called attention to the instrument devised by Dr. Thomson, of Philadelphia, for the detection of color-blindness, which is in use on the Pennsylvania Railroad, and asked if any cases were known where this instrument had failed. With Thomson's test it seemed possible to have large numbers of men tested quickly by the officers of the road, for a record is made of each case by putting down the number of the skeins of worsted which were picked out to match the test colors; and the medical officer can detect at a glance on looking over those blanks the cases which are color-blind or which need further examination by an expert, for the real colors are marked with odd numbers and the confusion colors with even numbers, and the position of the skeins can be altered on the instrument so that fraud may be avoided. It seems much better to have an examination made in this way, subject to the supervision of experts, rather than not to have any examination whatever.

Dr. JEFFRIES replied that this method of Dr. Thomson, as he has frequently shown, deprived the examiner of watching the examined for the little arts which were so valuable as hints in diagnosis. The plan of the Pennsylvania Railroad Company was too costly to be carried out by our small roads. An expert could, as had the speaker, test in a car attached to the paymaster train the employees without taking them from their work. Their cases could be decided *then*, without loss of time or money to the company. The examiner should, of course, be legally appointed, and ascertain whether a man came up to equally legally established standards. As is done in Sweden under national laws, a sufficient number of experts can be appointed and taught by a competent head, who could retest when needed, precisely as Professor Holmgren is at the head of the control in Sweden. Holmgren's test is the quickest, and shows at once the defective. The case is settled then and there. Railroad officials may ask for further tests with flags and lanterns, to keep their peace with their men, but even these latter would soon get tired of such appeal. From such tests as are now made in Massachusetts, Dr. Jeffries would also appeal with the employees.

Dr. F. C. SHATTUCK read a paper entitled

THE DIAGNOSIS OF THE SO-CALLED "FUNCTIONAL MURMURS."¹

Dr. G. M. GARLAND presented a communication entitled

THEORIES REGARDING THE MECHANISM OF THE INORGANIC CARDIAC MURMURS.²

In the discussion which followed, Dr. J. J. PUTNAM stated that he believed he had recently seen an example of the functional diastolic murmurs of which Dr. Shattuck had spoken. It occurred in a very nervous and anæmic boy of twelve, with relapsing chorea, and had been present for several months.

The murmur was in character a soft but distinct whiff, and was heard along the left border of the sternum and nearly to the apex. It was thought at first to be organic, but the absence of signs of distinct enlargement, the presence of other (variable) murmurs which were evidently functional, the fact that

¹ Vide page 25 of this number of the JOURNAL.

² See page 28 of this number of the JOURNAL.

both sounds to the right of the sternum were clear, and that there was no regurgitant pulse in the retinal arteries, had led him to suspect that this also was functional. This suspicion had been strengthened by reading the cases of Weiss, to which Dr. Shattuck had referred him.

DR. HENRY I. BOWDITCH said that he was glad to note the conservative views of Dr. Shattuck in regard to condemning a patient because of a cardiac murmur. Dr. Bowditch thought physicians were rather apt to condemn patients, wherever there was a murmur, to a more or less invalid life forever afterwards, even though the patient may feel well, and the heart may be healthy in every other respect, and the cardiac functions properly performed. The shock of such a prognosis to the patient often becomes a very important element in the subsequent health, although the influence of that shock is often underrated by the attending physician; in truth it may be wholly ignored by him. Even in the most severe cases of organic cardiac disease we should always give a hopeful prognosis, and we never should declare the condition hopeless.

Dr. Bowditch instanced a case of most extreme severity, where orthopnoea had existed for three weeks, and there were all the undoubted signs of organic cardiac disease. The physician pronounced the case hopeless, yet she did recover so far as to be able to perform all the duties of an active life. She seemed comfortable and happy, and yet there were still present the signs of organic disease of the heart.

Dr. Bowditch gave the following formula, which he had often found of great service in relieving even the most serious cardiac affections:—

R Pulv. digitalis	gr. x.
Pulv. colchici semmi	gr. xx.
Sodæ bicarbonatis	gr. xxx.
In 20 pills or powder.	

One taken three or four times daily at first, and gradually lessened so that at last only one is taken at bedtime, and the treatment continued for three to nine months. It had been his invariable prescription for the last twenty-five years. It had been offered to him by the late Dr. Twitchell, of Keene, who had used it twenty-five years, and he himself had been advised to use it by the well-known Nathan Smith, of New Haven, who after an equally long experience had found it of great value. Dr. Bowditch had used, in addition, over the heart, for months, and as he believed with advantage, the following:—

R Iodinii	3 ss.
Ether	3 ss. M.

In confirmation of the assertion that there may exist for many years an evident valvular murmur unchangeable in character and without injury to health, Dr. Bowditch cited the fact that many years ago, when examining a patient, he had found a cardiac murmur, but as it apparently did not interfere with the health of the patient he had simply advised reduction of all action likely to stir up the heart. He had seen recently the same individual, and so far as he could judge from the old record, and that of to-day, the heart sound had not changed in the least, nor had the patient had any cardiac symptoms.

PLASTIC OPERATION FOR BURN.

DR. C. B. PORTER exhibited the result of a plastic operation for a burn of the fore-arm, received eighteen months previous, which had resulted in a cicatrix cov-

ering the anterior surface of the fore-arm and wrist, contracted so as to flex the hand on the fore-arm beyond a right angle. A flap was taken from the middle of the anterior surface of the abdomen, extending from the median line outwards and backwards to the lumbar region, where the pedicle was made. Relying on the lumbar branches of the abdominal aorta and the ileo-lumbar from the internal iliac to supply nourishment to the flap. The cicatrix was dissected off, laying bare the superficial group of muscles. The arm was fixed to the corresponding side, and the flap stitched into position. At the end of six weeks the pedicle was severed, the flap having firmly united. The result of the operation was a straight wrist, and a power of flexing the fingers, which was impossible before the operation, and the restoring to him a useful hand.

On recommendation of the Committee of Supervision, it was voted to omit all meetings of the general Society except the stated and annual meetings.

The officers were then elected for the ensuing year, the names of whom have been already published.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.¹

C. B. NANCYREDE, M. D., RECORDER.

DR. J. H. MUSSER for DR. R. M. GIRVIN reported a case of

CARCINOMA (SCIRRHUS) OF THE BREAST.

In November, 1882, Miss —, a lady of good circumstances, with a hereditary tendency to carcinoma and scrofulosis from the mother, noticed at the upper portion of her breast a small, extremely tender lump the size of a hickory nut. The nodule increased in size, and on the day of removal, February 17, 1883, was as large as a duck's egg in the first position mentioned. Neither at that time nor at any other time was the nipple either diseased or retracted, or the mamma discolored. The breast had never been injured. The lymphatics were not involved. The general health and nutrition were good.

The operation was performed on the above date by Dr. Girvin on account of severe paroxysmal pain. So severe was this symptom that a slight opium habit developed. The wound healed nicely. There has been no return of the disease (May 20th).

Examination of a section of the hard mass in the gland demonstrated it to be a scirrhous.

CARCINOMA (SCIRRHUS) OF THE RECTUM.

By J. H. MUSSER, M. D.

At the autopsy of the person from whom these specimens were removed, made thirty-six hours after death by Dr. W. E. Hughes, we found rigor mortis well marked, the body greatly emaciated, the skin of a yellow-earth color, and on the right buttock near the gluteal fold the ragged grayish openings of several sinuses, which, we subsequently proved, communicated with a sac behind the rectum. This sac opened into the rectum, which at that point was greatly dilated. At the bottom of the dilated pouch in the posterior wall, towards the anus and two and a half inches therefrom, was a hard mass. This mass was the size of a silver dollar, involved two thirds of the wall, but did not cause occlusion of the gut. The surface was ulcer-

¹ Concluded from page 15.

ated. The bowel towards the cæcum was dilated, the mucous membrane congested, and the muscular coat hypertrophied. The remainder of the intestine was normal, and the glands of the mesentery were only slightly enlarged. The liver weighed four and one half pounds, was very fatty, and in the left lobe a secondary mass larger than a walnut was found. The apex of the left lung was the seat of a small area of catarrhal pneumonia; the base was bound down by rather recent adhesions. Further than this, the tissues presented no other change than that due to wasting disease. Microscopical examination revealed the two nodules to be of the nature of a hard cancer.

The patient, a female, thirty-seven years old, had always been a dyspeptic and of a constipated habit. Her mother and one sister had died of cancer of the stomach, her maternal uncle of the same disease of the liver. I attended Mrs. R. from October 11, 1881, to February 7, 1882. She died in May of the latter year. From the 5th of August previous to my first visit she had been suffering from so-called dysentery, twenty to thirty bloody and mucous stools, with tormina and tenesmus. She had grown very feeble and lost much flesh. My notes state abdomen flat, tender all over, especially in the fossæ, but no tumor noticeable. Dysenteric diarrhœa continued, and I may say these discharges kept up during my attendance, at times better, again worse. The mucus was always present, the blood at times none, again slight, or again in large amounts. The appetite was poor, and her dyspepsia bad. The debility and emaciation progressed, and the appetite became less. In November I detected a hard tumor with apparently a raw surface, two inches and a half from the anus. Early in December she developed pneumonia, and on the 31st the acute pleurisy. During December and January she complained of pains in the legs and of severe cramps at night. In January she began to complain of pain in the right hip posteriorly. Local and internal remedies scarcely relieved it, and finally the post-rectal abscess discharge. Death from exhaustion ended the career of horrible suffering. I would remark that in all probability the obstinate constipation predisposed to the location of the disease. The constant irritation of the hardened fæces would tend to the deposition of the cancerous growth in this locality in a person predisposed to that disease. I have not seen constipation noted as a factor in the etiology of rectal carcinoma, but I think such a view plausible, and that we may infer the practical point, — the bowels to be kept free in the cancerously inclined.

SARCOMA OF THE BLADDER.

By J. H. MUSSER, M. D.

I am indebted to my friend, Dr. Samuel R. Skillern, for whom I made the autopsy, for the privilege of exhibiting this very interesting specimen. At the time of the examination the skin of the body was of the characteristic cachectic hue, the rigor mortis was marked, the emaciation considerable, though not striking, for on section there was a fair amount of fat in the abdominal walls and in the omentum, while the muscles were comparatively large. The abdominal cavity alone was examined. The peritonæum was healthy, the stomach and intestines of a normal appearance. Neither the mesenteric nor any other lymphatic glands were affected. The liver was slightly enlarged and fatty, the spleen normal. The genito-urinary tract was removed intact, the kidneys being severed from their

attachments with difficulty on account of being surrounded by fat. Beginning with the kidneys the left was about half the natural size, with thickened adherent capsule. The pelvis was very greatly dilated, the secreting portion reduced to one third the natural size. The medullary portion was mostly atrophied, the cortical was thin, hard, and pale. The right kidney was larger by one third than normal, was also cirrhotic, and although its pelvis was dilated the secreting portion was not atrophied very much. The ureters were very much dilated, averaging the size of the index finger. The bladder was in its normal position, and on opening, the calibre was found lessened by one half, the walls much hypertrophied. At the base of the bladder in the trigone vesicæ a flat tumor was detected. It measured two inches transversely, and one antero-posteriorly. The base of the tumor was smaller than the upper surface. This surface was irregular, at some places ulcerated, at others covered with phosphatic concretions. The orifices of the ureters were found by hydrostatic means to open into the tumor, and hence were somewhat occluded. The urethral canal was not encroached upon. To the left of the large tumor were two small secondary masses. Microscopical examination of the kidneys and the tumor: in the former interstitial and tubular nephritis was found. The tumor was of the histological appearance of a sarcoma. The sections are under the microscope for examination.

The person from whom these specimens were removed had been a successful minister in charge of a large congregation. He had always been a great mental worker. At the time of his death he was fifty years old. During his life his habits were most exemplary. His previous health was good. In his family history no evidence of hereditary disease could be traced. For the clinical history I am indebted to the various medical gentlemen that attended him.

Professor Agnew was consulted more than two years prior to death on account of vesical irritation. Six months thereafter he passed blood by the urethra. Careful examination at this time and before, both by the urethra and rectum, failed to detect any tumor or calculus. In a short time the cachectic hue became evident, and with all the professor suspected malignant disease. The hæmorrhages became more profuse and occurred more frequently. Professor Tyson was then consulted. He very kindly allows me to extract the following from his notes: —

Dr. Tyson said that Mr. S. first came under his observation May 27, 1880, being then forty-seven years old. He stated that he had been annoyed by frequent micturition for about five years, which gradually increased until at that time he had to rise two or three times each night, but thought it was more frequent during the day than at night. At first he was completely relieved of this symptom during his vacation, which he spent in the woods, and was still much better at such times. He thought Poland waters gave him relief, and he felt compelled to use it constantly. There was at this time a burning sensation at the neck of the bladder. The urine at this date contained one twelfth its bulk of albumen, enough blood corpuscles to give it a "smoke-hue," but no casts. On June 22d he again reported, Professor Agnew in the mean time having passed a sound, and detected a slight stricture, which he thought accounted for the symptoms. The patient was instructed to pass a sound for himself, and

he thought it gave him great relief, not only diminishing greatly the desire to pass water, but also relieving the sensation at the neck of the bladder.

Dr. Tyson did not see him again until October 31, 1881, when he reported that during the previous year he had been using the bougie at one time as often as five or six times a week, but more frequently every three or four days. He had been very well during this time, gaining ten pounds in his summer vacation, and at that time not urinating more frequently than any one else, although he kept up the use of Poland waters, of which he was drinking eight tumblers a day for five weeks while at the spring, and when at home five a day. He now mentioned that during the summer he felt an occasional soreness in the region of the bladder when stooping, and noticed also occasional chalky deposits in his urine. At the time of this visit his urine was acid, specific gravity 1014, and contained one fifth its bulk of albumen, but no tube casts. No note of blood was then made.

On November 7th his urine contained a sediment equal to about one tenth to one twelfth its bulk, which was composed mainly of blood corpuscles. There were a few leucocytes. He continued to visit Dr. Tyson until March 28, 1882. During much of this time he reported himself improved, there being much less frequent micturition at times, while the uncomfortable sensation at the neck of the bladder was less. The Poland water was discontinued, and ordinary drinking water substituted, with about the same effect in relieving the symptoms. During most of this time he took oil of eucalyptus in doses of from six to ten drops three times a day, we thought at the time with good effect, but the same changes occurred when he was taking nothing. His urine was always albuminous, sometimes containing blood appreciable to the naked eye. Once or twice he passed a small clot of blood from the bladder, and on January 7, 1882, a larger clot, which he compared to a small leech. Two or three times he brought chalky concretions, evidently phosphates, which he had passed. He always thought the bougie relieved him. He was always worse after a hard day's work, as on a Monday after preaching a couple of times Sunday. Benzoic acid and ergot were used with about the same effect. The oil of eucalyptus apparently gave temporary but no permanent advantage.

On March 28th he reported for the last time, and said that since his previous visit, seven weeks before, he had been very ill with what seemed to be an attack of great prostration, during which the urine was little altered except that there was increased phosphatic sediment. More recently, however, there seemed to be always, except for short intervals, more or less blood in the urine. At no time during his appearance did he present a cachectic appearance nor any other symptoms except those mentioned of intermittent hæmorrhage from the bladder and symptoms of vesical irritation, and malignant disease of the bladder had not been suspected while he was under his observation, but it was thought rather there might be a hæmorrhoidal condition of the prostatic plexus of vessels.

During the summer and fall of 1882 the general health of S. failed very much, while the vesical irritation was quite pronounced. When under Professor Agnew's care he began to use a sound, and at this time used it daily for its soothing effect. Along with the slight vesical tenesmus, he suffered from a little

pain at the head of the penis from the very first. During this time and in the winter the hæmorrhages continued. The blood was discharged before the urine; sometimes a considerable amount of pure blood, fluid, or in clots. The bloody discharges occurred with every urination, or days would pass by with clear discharges.

Dr. Skillern attended S. from 'January 9, 1883, until his death in March (13th). From his notes, in addition to the above, I glean the following facts: The occasion of the first visit to the patient was due to a fit which he had, and the nature of which was not clear, although it was probably a syncopal attack from blood loss. He suddenly became unconscious, and when seen had a pallid face, cold clammy extremities, a feeble pulse, and shallow respirations. There had been no convulsion, although slight convulsive movements were noticeable. Hypodermic injections of amyl nitrite soon aroused him, although he dozed for an hour afterwards. There is no evidence to prove that the seizure was uræmic. At this time his general condition was very bad. During January it is noted that he used the catheter frequently on account of a slight difficulty to start the flow of urine, and that in using it a grating sensation was felt by him; that the paroxysmal hæmorrhages continued; that the constant feeling of discomfort at the neck of the bladder and dysuria grew worse. Micturition occurred every two hours. In addition to the above in February he had morning nausea and vomiting, — generally losing his early meal, — becoming more frequent later in the month. The loss of flesh and strength became very evident, as did the cachectic appearance. Two weeks prior to death he began to complain of renal pain; the twenty-four hours prior the pain was agonizing. He died of exhaustion. It may be noted that the urine was never suppressed, nor was there ever marked vesical pain.

Dr. Formad expressed the opinion, from an examination of the urine several weeks before death, that malignant disease of the bladder was present, confirming the opinion of the other gentlemen. His opinion was based on the character of the epithelium in the deposit, being of the appearance of the deep layers of the bladder mucous membrane.

Dr. Agnew kindly informs me, without referring to his notes, that he distinctly recalls four cases of sarcoma of the bladder, all in males; and in all bloody urine was an early and constantly recurring symptom, amounting in one of the cases to very profuse hæmorrhages. Pain in one or both hips was also an early symptom. The patients were all over forty years of age.

This interesting note calls attention to the chief facts of these cases, and an especially noteworthy one, — the age of the patient. As is well known, sarcoma in other situations generally occurs in early life; this in later life. Then an examination of the relation of the mouth of the urethra to the flat tumor will show how readily a sound could have passed over the tumor, while the base of the bladder being filled the sound could not engage the mass. The enlarged prostate was no doubt deceptive, obscuring the basal mass when rectal touch was made.

— Dr. Louvain, of Carlsbad, has met with several cases in which difficulty of breathing was due to the administration of moderate doses of salicylic acid; the breathing was labored and rapid.

MASSACHUSETTS MEDICO-LEGAL SOCIETY.

W. H. TAYLOR, RECORDING SECRETARY.

THE sixth annual meeting was called to order at the rooms of the Boston Medical Library Association, on June 12, 1883, at 11.15 A. M., by PRESIDENT PRESBREY. Twenty-one members were present. Records of the last meeting were read and approved.

The report of the Executive Board, showing the work of the medical examiners throughout the State who are members of this Society, was read by Corresponding Secretary PINKHAM, and accepted.

Medical Examiner PINKHAM, in his report, referred to the large amount of work involved in using the present form of blank for report of cases, and made some suggestions for a blank form which would in a great measure obviate this labor.

Voted, on motion of Medical Examiner Hurd, that the Executive Board be authorized to prepare blanks as proposed by the corresponding secretary.

Voted, on motion of Medical Examiner Tower, that the corresponding secretary be instructed to request members to report cases of special interest for publication.

Upon recommendation of the Executive Board Medical Examiner F. K. Paddock, of Pittsfield, was unanimously elected a member of the Society.

The treasurer made his report, which was accepted.

Voted, on motion of Medical Examiner Pinkham, that a committee of three be appointed by the chair to retire and report a list of nominations for officers for the ensuing year.

The President appointed Medical Examiners Harris, Hurd, and Pinkham as such committee.

The committee having retired reported the following list, which was unanimously adopted: For President, Medical Examiner S. D. Presbrey, of Taunton; Vice-President, Medical Examiner F. Winsor, of Winchester; Corresponding Secretary, Medical Examiner J. G. Pinkham, of Lynn; Recording Secretary, Medical Examiner W. H. Taylor, of New Bedford; Treasurer, Medical Examiner C. C. Tower, of South Weymouth.

The President appointed as Executive Committee Medical Examiners F. W. Draper, of Boston; Y. G. Hurd, of Ipswich; and J. C. Gleason, of Rockland.

Medical Examiner O. T. HOWE, of Lawrence, read a paper entitled *A Strange Case*, being the report of a suicide attended with unusual circumstances. The paper was listened to with much interest, and was received with applause by the Society.

Medical Examiner J. G. PINKHAM, of Lynn, read a paper on Infanticide, with Report of a Case of Infanticide by Drowning. The speaker's remarks commanded the close attention of the members, and were received with applause.

Both papers were the subjects of interesting discussions.

It was voted to dispose of the copies of the Transactions now on hand and to be published, to members and ex-members of this Society at the discretion of, and upon application to, the treasurer.

—Tending to corroborate the idea that malaria is caused by any vegetable decomposition is the case reported by Dr. Eichwald, of St. Petersburg, of a lady who lived constantly in a room filled with flowers in pots, and who thus acquired an intermittent fever with symptoms of true malaria.

Recent Literature.

Therapeutic Hand-Book of the United States Pharmacopœia, being a Condensed Statement of the Physiological and Toxic Action, Medicinal Value, Methods of Administration, and Doses of the Drugs and Preparations of the Pharmacopœia for 1880. By ROBERT T. EDES, A. B., M. D. (Harvard), Professor of Materia Medica in Harvard University, etc., etc. 397 pages. New York: William Wood & Co.

Our present official list is so good that physicians ought to become more familiar with it, and any work which will help to do this should be welcomed. The hand-book which we are considering is eminently fitted to accomplish this and more.

The arrangement of this excellent work is an alphabetical one like that of the Pharmacopœia. The directions for making the preparations are replaced by an outline of their physiological, chemical, and especially their therapeutic and toxic properties. This has been done with great care, and the author has succeeded admirably in giving in a clear and concise manner what is most essential. In addition to official title the common name, the French, German, and that by which many of the drugs are known in foreign pharmacopœias are given. To each of the more important drugs a few pages are devoted, many are mentioned only briefly, and under some headings the dose only is given. The increased strength of the opium preparations is carefully noted. A pharmacopœia almost necessarily includes a very large number of things which are of slight importance. In a new edition of the therapeutic hand-book many of these might be omitted from the text at least, they being retained, perhaps, in the index, and distinguished from the others by different type. It would be useful to know the proportion of the ingredients in certain of the preparations, for example, that liquor pepsini contains saccharated pepsin, 4, dilute muriatic acid, 1.2, glycerine, 40, water ad., 100; or that the syrup of the hypophosphites with iron contains one per cent. of lactate of iron.

The author says he "has endeavored to suggest, so far as possible, principles of treatment rather than to mention the name of each disease in which each drug has been or may be used." This choice deserves warm commendation.

Two tables such as are in the Pharmacopœia, one of solubilities, and the other a table including the more important changes in the strength of preparations in the last and present Pharmacopœias, might be found useful.

The book is one which should be studied by every practitioner and student of medicine.

The Practitioner's Ready Reference Book. A Handy Guide in Office and Bedside Practice. By RICHARD J. DUNGLISON, A. M., M. D. Third edition, thoroughly revised and enlarged. Philadelphia: P. Blakiston, Son & Co. 1883.

This third edition of this useful book has been not only revised, but very considerably enlarged with much matter, a ready access to which is of moment to the practitioner. The book is valuable for its purpose, and thorough, and has attained an assured popularity. We regret to see the offensive word *allopath* used in any connection on its pages.

Medical and Surgical Journal.

THURSDAY, JULY 12, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter.

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THE MEDICAL ASPECTS OF THE TIME OF THE STUARTS.

THE JOURNAL in a previous issue has alluded to a few items of medical interest in the England of two centuries ago. We have thought that our readers might enjoy some further glimpses of the same period. We are indebted for the facts, as before, to the paper of Dr. Macdonnell read before the Athenæum Club, and published in the May and June numbers of the *Canada Medical and Surgical Journal*.

Political considerations, of course, influenced, in a measure, the *personnel* of the court physicians, though the favorite attendant of Cromwell, who, at least in his younger days, was a great hypochondriac, was a royalist. On the other hand the attendants who were allowed the executed monarch were roundheads. We are told that one Trapham, surgeon-in-chief to the army of Oliver Cromwell, embalmed the king's body, and that during the operation he uttered several coarse jests and unfeeling expressions. Yet, though he did say that he was stitching on the head of a goose, he did his work well. After 165 years the features of the king were plainly recognizable, bearing a striking resemblance to his portrait in coins, busts, and paintings. The fourth cervical vertebra was found smoothly divided transversely.

Some interesting contemporary opinions are given by Dr. Macdonnell regarding Harvey, who, by the way, it appears died in affluence and esteem instead of the poverty and neglect which some have ascribed to him. His good fortune was due, in part, to the fact that the royal whim took a fancy to physiological investigations, and made them popular. Harvey's experiments greatly interested Charles I., and the fashionables of 1642, instead of, as in 1882, throwing obstacles in the way of advancing science, not only witnessed dissections of living animals, but actually furnished the subjects for them. Aiken tells us that the interest his majesty took in Harvey's researches were of singular service to him in his investigations concerning the nature of generation, as the king's favorite diversion of stag-hunting furnished him with an opportunity of dissecting a vast number of animals of that species in a pregnant state.

Cromwell's death was apparently due to fever and ague, to which James I. also fell a victim. The Great Protector, who was probably predisposed to his fatal illness by the depression due to family griefs (notably the death of his daughter by cancer) as well as by an intercurrent attack of gout, had a persistent belief

that he would recover, and his physicians (with the apparent exception of the royalist above mentioned) betook themselves with great fervor to prayer, the patient saying, "Ye may have skill in the nature of things, yet nature can do more than all physicians together, and God is far above nature." Cromwell was the last Englishman of note to die of ague, cinchona bark coming into use in England about 1655. Unfortunately its use received a check at the beginning on account of the death of an alderman while he was taking the bark. This gave rise to so much public talk of its dangers that physicians feared to use it. The malarious character of the English climate at that period is thus explained: The soil about London was neither drained nor, during some months of the year, cultivated. The marshes of Cambridgeshire and Lincolnshire were covered with clouds of cranes. Southwark was a swamp, and at Westminster there is a gate called the Marshgate, from being situated in a place where there was once a marsh. Ague was less prevalent after the Great Fire. The number of deaths decreased per annum rapidly. In 1728 there were forty-four, and in 1730 only sixteen. In the ten years from 1800 to 1810 four deaths were registered. Dr. Caius says that ague was so fatal in London in 1558 that the living could hardly bury the dead. Burnet says it raged like a plague. According to Sydenham, from 1561 to 1565 it was the most fatal disease in England. In the Walcheren expedition 10,000 men, two thirds of the English force, died of marsh fever.

The body of Cromwell was got rid of in some mysterious manner immediately after the autopsy was over. A wax figure in a suit of velvet, richly laced with gold and trimmed in ermine, lay in state in Somerset House, in a room hung with black velvet, until 23d November, when it was buried in the abbey. The ceremony cost £6000. The "mummery" of a funeral service over a coffin containing no corpse is not, as we thus see, entirely a peculiarity of almshouse management, nor, as has recently been intimated in certain quarters in this State, is it a trick practiced only on those who are too poor to prevent it. In 1660 the Lords and Commons thought that they might then with safety kick the dead lion. An order was passed "that the carcasses of Oliver Cromwell, Henry Ireton, John Bradshaw, and Thomas Pride, whether buried in Westminster Abbey or elsewhere, be with all expedition taken up and drawn upon a hurdle to Tyburne, and there hanged up in their coffins for some time, and after that buried under the said gallows." In a pamphlet in the Harleian Miscellany it is recorded that a certain clergyman, whose name is not given, made a sworn statement shortly after this desecration of Cromwell's remains that roundheads in disguise had taken that of Charles I. from its resting-place, and substituted it for that of Cromwell. Although a dead body of an unknown person took the place yet it was highly improbable that it was that of the king, for, as has been mentioned, the royal corpse was found intact in the beginning of this century in its coffin. At all events

the body of Cromwell was never found, and it is supposed that his friends, anticipating that it would some time be molested, procured medical "opinion" that a likelihood of unusually rapid decomposition necessitated its early interment. Thus it was quickly and quietly disposed of.

At the restoration Charles II. did not remove the former court physicians, but added a number whose morality was congenial with his own. Like his father, this king also dabbled in anatomy, and Pepys says that in 1663 he witnessed the dissection of three human bodies by Dr. Clarke and Mr. Pierce the surgeons, with which he was "highly pleased."

Of the medical friends of Charles II., Hamey was apparently the most respectable. A Fellow of the R. C. P. in 1634, he commenced the uphill drudgery of practice with the mill-stone of poverty about his neck. He was a faithful churchman, and a devoted royalist. The downfall of Charles I. caused a great falling off in his practice; indeed to such want was he reduced that he was on the point of quitting London, when a fortunate event occurred which not only relieved present necessities, but which put him at once into affluent circumstances, enabling him to send Charles II. sums of money he had obtained by the spoiling of the Egyptians. Mr. Palmer, a kinsman, in his biography of Dr. Hamey, tells the story:—

"Things had been going the wrong way with Hamey for some time. Most of his cavalier patients were in exile, and those at home had no fees to give him. Anxiety had brought on illness which prevented him entirely from earning his daily bread. There was not a penny in the house. The very first time he dined in his parlor afterwards a certain great man in high station came to consult him '*ratione vagi sui amoris*,' says Dr. Hamey, and 'he was one of the godly ones, too, of those times.' In fact it was no other than the pious Ireton.

"After the doctor had received him in his study, and modestly attended to his long religious preface, with which he introduced his ignominious circumstances, and Dr. Hamey had assured him of his fidelity, and given him hopes of success in his affair, the generous soldier drew out of his pocket a bag of gold, and offered it all in a lump to his physician. Dr. Hamey, surprised at so extraordinary a fee, modestly declined the acceptance of it, upon which the great man dipping his hand into the bag grasped up as much of his coin as his fist could hold and generously put it into the doctor's pocket, and so took his leave." This successful case brought the physician others of a similar nature from patients of the same class, so that it marked the beginning of his fortune.

The rest of Charles's special physicians were a bad lot. One named Archer especially encouraged the king in the pursuit of his sensual pleasures. His essay on the advantages to be derived from intemperate drinking was entitled, *The Possibility of Maintaining Life from Infancy to Old Age without Sickness by the Use of Wine*. Pepys seems to have been quite fascinated by some of the doctors' stories. He quotes one where the college, apparently for the sake of a "lark," in-

duced a poverty-stricken old debauchée, for the sum of twenty shillings, to allow twelve ounces of sheep's blood to be injected into his vein. The jokers seem to have been disappointed at the harmless result of their experiment. Pepys concludes a description of these gentlemen's pleasant stories as follows:—

"On this occasion Dr. Whistler told a pretty story related by Muffett, a good author, of Dr. Caius, that built Caius College; that being very old, and living only at that time upon woman's milk, he while he fed upon the milk of an angry, fretful woman became so himself; and then being advised to take it of a good-natured, patient woman he did become so beyond the common temper of his age. Their discourse was very fine; and if I should be put out of my office I do take great content in the liberty I shall be at of frequenting these gentlemen's company."

The last illness of Charles II. (who died of apoplexy after four days' sickness) is thus described:—

"At eight A. M. the king lost speech and motion. He was engaged at the time in making chemical experiments. Sir Edmund King, surgeon employed in the army, who was giving the king instructions in the laboratory, ran to his assistance and promptly bled him to the extent of sixteen ounces. King, for his presence of mind, was awarded a vote of thanks from Parliament, and a gift of £1000. He got the thanks, but never the money. The court physicians to the number of fourteen then arrived. They approved of what had been done, and ordered further venesection to the extent of eight additional ounces. An antimonial emetic, a powerful purgative, and several clysters were administered. A blister to the head was applied. The king did not rally, but remained until death in a lethargic, dreamy condition. The loss of the power of coördinating words added to the misery of his condition. Conflicting ecclesiastics struggled for an audience at each glimmer of consciousness. He probably said 'yes, yes,' or 'no, no,' to all interrogations indifferently, agreeing with the last speaker, not knowing the meaning of the words he uttered."

Macaulay's version of the story of the king's death can scarcely be correct. It is unlikely that a person in the king's state, with the brain compressed as it was found to be, would be sitting up in bed, exchanging polite speeches with the courtiers, and apologizing for the unconscionable time he took in dying.

MEDICAL DIPLOMAS IN MASSACHUSETTS.

It is with much satisfaction that we refer again to the matter of bogus diplomas. The anomalous condition of affairs which has existed in this State has been decidedly improved by the following act, which received the sanction of the executive on June 30th:—

An act to prohibit certain medical societies from conferring degrees.

Be it enacted by the Senate and House of Representatives in general court assembled, and by the authority of the same, as follows:—

SECTION 1. No corporation organized for medical purposes

under the provisions of Chapter 115 of the Public Statutes shall confer degrees or issue diplomas or certificates conferring or purporting to confer degrees unless specially authorized by the Legislature so to do.

SECT. 2. An officer, agent, or servant of any corporation mentioned in Section 1, or any other person conferring degrees, or signing, issuing, or authorizing the signing or issuing of any diploma or certificate purporting to confer any degree of medicine or surgery, contrary to the provisions of this act, shall be punished by fine of not less than \$500, nor more than \$1000.

It will be remembered that the officials of the Bellevue School were discharged from custody on an opinion that the sale of diplomas by corporations incorporated under the general laws of the State was not forbidden by law. The Legislature has wisely filled the gap.

ESERINE IN DIARRHŒA.

DR. ESCHLE, in the *Neurologisches Centralblatt*, May 15th, reports observations made in the Richter'schen Heilanstalt (Pankow-Berlin) on the curative effects of calabar bean preparations in catarrhal conditions of the digestive tract. Eserine (physostigmin), the alkaloid which with calabarin is found in the seed of the physostigma venenosum, was used some time ago in the same institution, where it gave great satisfaction in quieting maniacal patients, and for such paralytics as were not liable to apoplectic attacks. The action of the drug proved similar to, though more lasting and reliable than that of, hyoscyamin. The method of exhibition was by the subcutaneous injection of a one half per cent. solution of sulphate of eserine in doses of .001 gramme to .0015 gramme. Its use was found to be always attended by alteration in the digestive organs. One maniacal patient who cried out continuously was quieted by the use of .0025 gramme; this rather large injection caused vomiting and free watery stools. The use of smaller doses quieted the psychical and motor restlessness, and produced sleep without vomiting or defecation. In three other patients (paralytics) stoppage was noted for over thirty-six hours, vomiting occurring only once. Quiet in bed was always ordered. The special object of the communication was to report the results of the use of eserine in three cases of intestinal catarrh.

The first patient suffered from an attack of this nature, causing continual desire to defecate, with a passage every half hour during the second day. Hypodermic injection on this day of .001 gramme of the eserine solution produced sleep in an hour and a half, which lasted from two o'clock till evening. No passage occurred until forty-six hours after the injection.

In the second case intestinal catarrh was brought on by a cold. A large number of watery stools were passed during the night and on the following morning. The same dose was administered at 10.30 A. M. The patient complained of general weakness and of numbness in the arm in which the injection was made. The pulse was slowed, but remained moderately strong. At four P. M. a watery passage occurred, after which none until twenty-seven hours after the injection, followed by stoppage of thirty-six hours; there was no vomiting. The patient was quite comfortable on the

evening of the day of the injection, having passed the afternoon half asleep.

The third patient, a man of thirty-nine years, suffered from chronic dysentery, acquired in Africa. On the day before the medicine was used twenty-four bloody stools were counted by the attendants. On the day of the first injection (.001 eserine sulph.) twelve stools were passed of unchanged character. During the twenty-four hours following the second injection (.0015) there were five passages striped with blood, and during the next twenty-four hours, four bloody stools. In the two days following the third injection (.0015) seven stools were passed, of which three were accompanied by blood. During the four days following the fourth injection (.0015) the passages varied from one to six, some with and some without blood. Vomiting followed the first two injections only. The writer remarks that although the last case was not watched to its termination, and although he could not promise himself a perfect cure, the result was sufficiently marked to illustrate the beneficial action of the drug in this dose in limiting the weakening hæmorrhages and albuminous stools. He also announces his intention of instituting shortly experiments on animals with regard to the contradictory action of the drug in large and small doses, a peculiarity already noticed in other medicaments.

MEDICAL NOTES.

— In an interesting letter to the *Boston Herald* a recent correspondent, in speaking of steamer life, criticises very justly the custom of loading down parting friends with flowers, whose odors after a few days add to the discomforts of the journey, while sentimentality prevents their being thrown overboard. This writer suggests that it would be wiser to substitute fruit, which is sure to be appreciated without adding to the disagreeable elements of sea-sickness. Practical as this suggestion is, the views of this malady expressed in the letter are certainly founded on fair-weather experiences. Arguing from the fact that the best medical authorities consider the malady cerebral, the conclusion is drawn that an exertion of the will, seconded by small doses of bromide of sodium, will overcome the difficulty. Even the late Dr. Beard, enthusiast as he was on the subject of the bromide, allowed that it was useless in small doses, and as for the other remedy suggested, we fear that the effort of will required to hold the symptoms in check during a severe blow would rack the strongest constitution.

— C. Ashton has studied the action of the heart in hibernating helices. The observation is difficult owing to the opacity of the parts and the necessity of guarding against the temperature radiating from the observer's body. The pulse seems to be irregular, or rather, perhaps, to pass through active and quiescent cycles. Absolute inactivity of the heart probably does not occur during hibernation. Under scrutiny the pulsations varied from three to twenty-two per minute. The animal is extremely susceptible to changes of temperature, as a touch of the finger will often

double the rate of pulsation, which also rises with exercise or motion. — *Quarterly Journal*.

NEW YORK.

— The deaths in the city for the six months ending June 30th numbered 17,174, against 19,906 for the first six months of 1882. Of the deaths from contagious diseases, 12 were from small-pox, 494 from measles, 549 from scarlet fever, 537 from diphtheria, 168 from whooping-cough, 6 from typhus fever, 118 from typhoid fever, and 130 from cerebro-spinal meningitis. Of the other deaths, 626 were from diarrhoeal diseases, 2795 from phthisis, 2291 from pneumonia, 877 from bronchitis, 917 from Bright's disease, 330 from croup, and 918 from disease of the heart. Of the total number of deaths 6558 were of children under five years of age, being 2505 less of this class than occurred during the first six months of 1882. During the six months 13,987 births were reported; an increase of 859 over the corresponding period of last year.

— The work of the summer auxiliary corps of physicians acting as sanitary inspectors, will, no doubt, prove more satisfactory this year than during any previous season from the fact that the appropriation for the present summer is sufficient to allow of the work being carried on for a much longer period than usual. Hitherto this special tenement-house service covered only five weeks, for which each of the fifty physicians of the corps received one hundred dollars; but this year it will embrace the entire months of July and August, and each physician will receive two hundred dollars for his services. Of the 78,368 houses used for dwelling purposes in the city, 35,000 are tenements, and 18,966 contain more than one family on a floor. During the five weeks of the service last summer the inspectors visited 153,982 families, and wrote 3671 prescriptions.

— The State Board of Health met at Albany June 29th, when the sanitary committee presented a detailed statement of its work under the laws in preventing the adulteration of food and drugs, and the sale and use of dangerous illuminating fluids. During the meeting Commissioner Erastus Brooks called attention to the alarming increase of pleuro-pneumonia among milch cows on Staten Island, and the Board passed a resolution asking the National Commission on Cattle Plagues to take action in the matter. In the meanwhile the local boards of health on the island are doing all in their power to prevent the further progress of the disease. As soon as an animal is attacked it is killed and buried, and the rest of the herd placed in quarantine. In two cases the carcasses of diseased animals, which had been sold to the butcher as soon as the sickness was noticed, were found in the meat markets about to be offered for sale.

PHILADELPHIA.

— The resignation of Professor Wallace from the chair of Obstetrics and Diseases of Women in the Jefferson Medical College, which took every one by surprise last month, has been followed by the election

of Prof. T. Parvin, of Indianapolis, to the vacant chair on the 24th ult., an action on the part of the trustees which was also a surprise to many, and a very agreeable one to most of those who have learned of it. Professor Parvin returns to this city after several years' absence, ripe in years, honors, and experience. He is so well and favorably known as a teacher and practitioner, as an editor and operator, that he needs no introduction to the American medical profession; there can be no question but that the Faculty of Jefferson College has been strengthened by this latest addition.

— The Polyclinic, whose success has been quite satisfactory, has now to compete with another rival, a recently created Post-Graduate Faculty at Jefferson College. There should be abundance of occupation for several schools of this kind in Philadelphia; if the attainments of the average student upon graduation may be taken as any indication, the polyclinics should be no less numerous than the medical colleges themselves. A professor of the University of Pennsylvania, indeed, very aptly compared the medical neonatus to the young marsupial, and said that he should not venture far from his mother's pouch nor attempt to go alone for some time after his birth.

CHICAGO.

— For ten years Illinois has had a liberal law regarding material for dissections. For several years the unclaimed bodies of known paupers dying in the hospital for such cases have been given to the colleges for dissection in accordance with the clear provisions of the law. But the law says such bodies *may* — not *shall* — be turned over to the colleges, so now the Board of County Commissioners have voted that no more bodies shall be given to the colleges, but that all shall be buried at the county expense, and they have bought horses and wagons and hired men to do this work. All this because the last county undertaker was guilty of illegal practices. It is alleged that he sold bodies out of the State, which is contrary to the law. There is not the smallest claim that the colleges have abused their privileges under the law. Yet this action is taken by the commissioners, a clear invitation to the colleges (if it means anything) to get their material by the methods in vogue before the law was passed.

— The building for the hospital of Rush Medical College will be commenced in a few days. It is to be located on a lot adjoining that on which the college stands, and immediately north of it. The structure will be about forty-five by seventy-eight feet on the ground, and will have four stories above a high basement. Friends of the college say it will be ready for occupancy by New Year's day. It is the intention of the college to add to the hospital building eventually, so that when finished it shall be at least three times as large as the building now in course of erection. Sufficient land has already been secured to enable extensive additions to be made.

This will be the only hospital in the West Division of the city, except the County Hospital, for the care

of general hospital cases. The only other hospital in this division of the city, which, by the way, has as much territory and as many people as all the rest of the city together, is the little "Hospital for Women and Children," which has a capacity of not more than twenty-five beds.

Correspondence.

LETTER FROM MAINE.

MR. EDITOR, — After the lapse of more than a year since the resignation of Dr. Harlow, the Maine Insane Hospital at Augusta has a new superintendent. Though candidates were abundant, the Trustees were unable to agree upon one, and finally requested Dr. B. T. Sanborn, who for sixteen years has been first assistant physician, to apply for the place. The methods pursued in the management of the institution will doubtless be identical with those which have characterized it for forty years past.

An attempt was made last year to induce the Trustees to elect a woman physician to have medical charge of the female inmates; but, as this failed, the present Legislature was petitioned to take action in the matter. The numerous memorials were referred to the Committee on the Hospital, and a public hearing was given at which most of the Trustees were present, one of them being in favor, one neutral, and, apparently, all the rest opposed to the measure. The committee decided that the Trustees should settle the affair, which was a very effectual method of killing the project, considering the pronounced hostility of a majority of the board. The principal point of strictly medical interest in the case is with reference to the amount of disease of the generative organs said to exist among the female inmates. The exact or even approximate figures were not given; but opponents of the proposed introduction of a woman as assistant physician asserted that the amount of such disease requiring treatment was extremely small. An eminent alienist has recently reported that he has found eighty per cent. of his female patients afflicted with disease of the sexual apparatus. It would be interesting to learn why the crazy women of this State are so wonderfully exempt from maladies requiring the skill of the gynecologist, for it is certain that their sound-minded sisters are not similarly blessed. Indeed, it would almost seem that the possession of uterine or ovarian disease in this region is incompatible with lunacy.

A subject which attracted a good deal of attention in the profession was the attempt to procure a law for the registration of practitioners of medicine. The measure was presented by Dr. O. A. Horr, of Lewiston, who was a member of the House of Representatives. The bill provided that graduates of any institution legally qualified to confer medical degrees, and all who had practiced without a diploma for thirteen or more years continuously, should be allowed to register; and that all persons practicing medicine without having been registered should be deemed guilty of a misdemeanor, and on conviction thereof be punished for every offence by a fine of from one hundred to five hundred dollars, or by imprisonment for a term of from three months to a year, or both. It will be seen at a glance that this was not a strong bill, for it admitted to registration the very worst of the quacks; but it

was believed to be impossible to get a law which should require every physician to be the possessor of a diploma from a respectable medical school, and it was thought best to try to get one which would be advantageous in the future, even if something was sacrificed in the present. The ignorant pretenders would die out after awhile, and in a dozen years or so there would be a great improvement in the quality of practitioners. The homœopaths quite generally favored the bill; but the eclectics, botanics, magnetics, Druids, and the like joined forces against it, and it was defeated by a small majority. As usual, the physicians who urged the passage of the bill got only abuse for their attempts to protect the public against the homicidal incompetence of the quacks; and some of us were led to query if it would not be better to wait until the people themselves ask for some law to shield them from the charlatans. But this feeling of discouragement and disgust will wear away in time; and when the next Legislature convenes it is quite probable that the same men will be seen again in the capitol working for the interests of an unappreciative public, whose injuries at the hands of quacks have aroused anew in the educated physicians a sympathy and indignation which displace all indifference to the general welfare. By the way, I wonder if you have in Massachusetts any of that class of doctors called Druids. It is said there are many in Maine; and they have in Lewiston a college which is chartered under the simple and unostentatious name of *The Penobscot Valley Gorsedh of Bards and State of Maine Branch of the Druidic University of America*. I may have something to say about this in a subsequent letter.

The Medical School of Maine, at Brunswick, has just completed a very prosperous term. Prof. Charles O. Hunt gave the opening lecture, discussing the germ theory of disease very interestingly and ably. The address at the close of the term was given by the Hon. Charles F. Libby, recently mayor of Portland, and a prominent member of the Cumberland bar. His subject was Professional Study and Work, and it was developed in a most scholarly and graceful manner. Twenty per cent. of the students in the school had college degrees. Twenty-eight candidates were graduated.

The Portland School for Medical Instruction opens this summer with the largest class which has ever attended.

The thirty-first annual meeting of the Maine Medical Association was held in Portland on the 12th, 13th, and 14th of June. The President, Dr. George E. Brickett, of Augusta, occupied the chair. The finances of the Society are in an excellent condition, thanks to the efficiency and fidelity of the Treasurer, Dr. A. S. Thayer, of Portland, to whom the Association presented its thanks and voted a salary of twenty-five dollars a year.

The amendments to the Constitution, proposed by Dr. E. F. Sanger, of Bangor, received no affirmative votes, and consequently failed of adoption.

The oration was given by Dr. M. C. Wedgwood, of Lewiston, who discoursed entertainingly on Rational Medicine and Quackery. He did not, as is so customary with writers of medical addresses, take the beaten track of denunciation of one or two prominent sects of practitioners; but, what was much more judicious and profitable, he pointed out and held up to merited contempt the charlatany of many men in our own ranks. Verily, the most irritating displays of quackery are

those made by regular physicians, on whom no written code can lay a finger or apply the toe of its boot.

Papers were read on Synovitis, by Dr. J. G. Pierce, of Freeport; on Acute Inflammation of the Middle Ear, by Dr. A. K. P. Meserve, of Portland; on Extra-Uterine Pregnancy, by Dr. H. N. Small, of Portland; on Fractures of the Elbow-Joint, by Dr. S. H. Weeks, of Portland; on Disease of the Mastoid, by Dr. E. E. Holt, of Portland; on the Induction of Premature Labor, by Dr. A. H. Burbank, of Yarmouth; on Bright's Disease, by Dr. I. T. Dana, of Portland; and on the Treatment of Accidents occurring during Parturition, by Dr. S. C. Gordon, of Portland. Dr. S. P. Warren, of Portland, reported a case of Absence of the Uterus, and one of Cyst of the Vesico-Vaginal Wall; Dr. J. A. Spalding, of Portland, a case of Injury to the Eye; Dr. B. F. Sturgis, of Auburn, a case of Chronic Abscess of the Tibia; Dr. F. H. Gerrish, of Portland, a case of Septum of the Bladder, preventing Lithotrity; and Dr. Weeks, of Portland, a case of Sarcoma of the Scalp. Cases were also reported by several of the readers of papers, and by others in the discussions, some of which were quite animated.

The following officers were elected for the ensuing year: President, Dr. O. A. Horr, of Lewiston; Vice-Presidents, Drs. L. W. Pendleton, of Portland, and D. E. Marston, of Monmouth; Corresponding Secretary, Dr. J. O. Webster, of Augusta; Board of Censors, Drs. H. N. Small, of Portland, W. K. Oakes, of Auburn, J. M. Bates, of Yarmouth, W. B. Cobb, of Standish, and J. D. Nutting, of Hallowell; Committee on Publication, Drs. C. D. Smith, C. O. Hunt, and G. H. Cummings, of Portland, C. A. Packard, of Bath, and B. F. Sturgis, of Auburn; Business Committee, Drs. J. E. Kimball, of Portland, and W. P. Watson, of Gorham. Dr. A. S. Thayer was elected Treasurer for five years, and Dr. C. D. Smith was, last year, made recording secretary for a term of ten years. Dr. A. L. Hersey, of Oxford, is to give the annual oration next year.

The meeting in 1884 will be held in Portland on the second Tuesday of June; and, as a committee on banquet was appointed, it is thought that the Association may devote an evening next year to purely social enjoyment.

LETTER FROM HONOLULU, HAWAIIAN ISLANDS.

MR. EDITOR,—Honolulu and the Hawaiian Islands have been so thoroughly written up in the daily press of late, that there are few people in our country who are not conversant with them commercially and politically, but there are many other interesting points which have only been occasionally touched upon, and a brief review of some of them may not prove inappropriate in the JOURNAL.

The discovery of the Hawaiian group of islands is generally accredited to Captain Cook who first visited them in 1778, but a careful inquiry elicits the fact that they were discovered many years previous by Gaetana, a Spanish navigator.

These islands lie just within the northern tropic, well out in the bosom of the broad Pacific, and are swept constantly from April to November by the northeast trade-winds. They are all of volcanic formation, and each one has several extinct craters, though Hawaii boasts the only active volcano, the celebrated

Kilauea. The great altitudes of the majority of the islands afford climates varying from frigid to tropical, and the cooling effect of the trade-winds naturally make the windward exposures much fresher than the sheltered portions. The average annual sea-level temperature throughout the group is about 77° F.

Honolulu, unfortunately, is situated upon the sheltered or lee side of the island of Oahu, and is consequently much warmer than many other towns in the kingdom. The trade-winds, however, are not entirely cut off, a goodly breeze generally sweeping through the *Pali*, or low place in the mountains, to the rear of the city. During the summer comparatively little rain falls in the city itself, though the mountains and high hills behind experience a shower nearly every afternoon; but from November to April southerly winds, called *Konas*, are apt to blow for a week at a time, bringing heavy rains, and causing langour, atrabiliousness, and even serious illness among the inhabitants.

Upon the whole, however, the general climate of the islands is very salubrious, and is exempt from the usual intertropical influences so fertile in disease production.

Honolulu being the metropolis of the kingdom, it is, of course, here that the great majority of foreigners congregate. The whole place seems to be in the hands of Americans, and they have so thoroughly Americanized it, that were it not for the tropical vegetation, one could easily imagine it a New England town. Strangers visiting this place will find the Hawaiian Hotel a very comfortable house to live in, but especially would I recommend the charming little cottages attached to it. In the other islands, unfortunately, there are few public houses, and the traveler has to depend chiefly upon individual hospitality for a place to put his head.

The city of Honolulu now contains about 16,000 inhabitants, of which nearly six thousand are foreigners. The mortality for 1880 was simply frightful, having been 72.62 per 1000; the high rate, however, coming entirely from the native element. The birth-rate in Massachusetts for the same year was 24.8 per 1000; in Honolulu 87.3. Death-rate in Massachusetts under five, 19.8; in Honolulu, 172.6. The Hawaiian statistics are not compiled in as careful a manner as they might be, so these comparisons will have to be taken with a certain amount of reserve.

The remarkable decrease in the native population of the Hawaiian Islands since the visit of Captain Cook in 1779 affords food for thoughtful study. Cook asserted that there were 400,000 people in the entire group, but it seems probable that this estimate was too high, and that really there were not more than 200,000. In a century this dense population has dwindled to 40,000, an annual decrease of nearly two per cent., and as the same exterminating causes continue to act, the probabilities are that the Kanaka will become extinct in twenty or thirty years more, or at least be as much of a curiosity in his own islands as the red man is upon our own Atlantic shores.

This slow but sure extinction of the Hawaiians has been the result of numerous causes, many of which are and have been easily remediable. It is more than probable that the diminution had begun before the time of Cook's first visit; at all events it has been in active operation ever since.

When the Boston missionaries first settled among the natives they found infanticide practiced to an alarming extent, mothers deliberately smothering, strangling, or burying alive their newly born. Mrs.

Judd,¹ the wife of that Dr. Judd to whom the Hawaiians owe their present form of government, mentions the frightful extent to which infanticide was carried in 1828, and records a case under her own observation where a mother was known to have buried alive eight out of ten children born to her. Civilization, however, has somewhat refined the native taste, so that abortion has superseded the more barbarous method, and the manner in which they induce it is well worth relating. The unfortunate woman is placed upon her back on the floor, and the officiating *Kahuna*, or medicine woman, taking a stone in either hand, proceeds to knead and squeeze the abdomen, endeavoring to get the uterus between the stones. Next she gets upon her victim's abdomen with her knees, and walks all over it so to speak. This violence generally brings on flooding, and in a short time abortion, but alas! frequently at the expense of the patient's life, though in one case which was cited to me dumb-bells replaced the stones in the operation, great violence being done, and yet the woman went on to term and gave birth to a healthy child.

Syphilis spread rapidly among the natives after the visits of the early navigators, and is said to have impregnated the entire race, destroying many, and rendering hosts sterile. Immorality, the curse of this ethnic stock, has, of course, greatly promoted the extension and perpetuation of syphilis and materially increased the number of barren women.

Leprosy, introduced by the Chinese about thirty years ago, has destroyed many of the Kanakas, and is steadily extending its loathsome and deadly hold. It is estimated that there are about 1600 lepers in the kingdom, 600 of whom are confined to the leper colony on the island of Molokai, and 100 in the leper hospital at Honolulu. Of the 900 at liberty the majority live in and around the metropolis. These lepers are constantly marrying non-lepers, and there seems to be no fear of the disease either among the pure Polynesians or half-castes. Foreigners generally experience immunity from it, though the man Derby, who turned up recently in Salem, Mass., was a well-known leper here for many years. He enjoyed the kind considerations of a native leper woman during the greater part of his residence in the islands, and it was from her that he contracted the disease.

Dr. Fitch, now in charge of the leper establishments, asserted a year ago that leprosy was merely the "fourth stage" of syphilis; he has recently modified this statement, and simply says it is a consecutive form. He treats all lepers upon the postulate that they are syphilitics, giving them a hearty dosing of the iodides and mercurials. There is no question but that the patients improve under this regimen; and further, that when taken in its incipency the disease is often apparently arrested. The good effects of this destructive treatment are easily explained when it is remembered that pathologically the lesions of syphilis and leprosy are identical, and essentially due in each case to local cell proliferation. From the foregoing facts it would appear that a bacillus is far from being the pathological entity of leprosy, Hansen, Cornil, and others to the contrary notwithstanding.

Epidemic diseases have been peculiarly fatal in these islands, especially small-pox, which, though it has only made its appearance twice, first in 1853, and again in 1881, has carried off thousands. Its first introduc-

tion was from California; the second from China by the Coolie ships. In 1848 terrible epidemics of measles, whooping-cough, and influenza occurred, thousands being swept away, and such consternation produced that ever since 1848 has been alluded to as "the death year."

The very unequal struggle which the semi-civilized and naturally indolent Hawaiian has to maintain with the vigorous, fast-coming white man is gradually but inevitably exemplifying Darwin's doctrine of the survival of the fittest.

Finally, nautical predilections and rapidly increasing intemperance contribute not a little toward extinguishing the last smoldering fires of this Polynesian life.

As the native disappears the foreigner takes his place, large numbers of Americans, Portuguese, and Chinese constantly seeking homes in the isles of the Kamehamehas'. The decrease of the native population from 1872 to 1878 was 4023, whereas the increase of foreign population for the same period was 5111.

Situated in the northern suburbs of Honolulu, and at the foot of an extinct crater, fancifully called the "Devil's Punch-Bowl," is the Queen's Hospital, completed in 1861 by Kamehameha IV. The original building, constructed of coral stone, only contained ninety-two beds, but in 1876 a small, detached wooden building was erected for the accommodation of foreigners, and in 1879 a brick addition was put on to the west end of the old structure for administrative purposes. The hospital appointments are by no means in consonance with modern ideas, but serve the purpose well enough in this mild climate. The daily average of occupied beds is about seventy-five. The grounds are spacious, picturesque, and well cared for, forming a charming retreat for convalescent patients. Drs. McKibbin and Trousseau are the medical officers, and the institution is in charge of the apothecary during their absence.

Honolulu, being so accessible from San Francisco, is naturally overrun by doctors, but, thanks to the fictitious values produced by the reciprocity treaty, prices are high, and all these gentlemen seem to be making a good living. A license to practice is easily obtained, the simple exhibition of a diploma from a chartered medical college being taken as sufficient evidence of competency. The superstitious credulity which so largely dominates the native mind would make this place an *El Dorado* for the enterprising quack, but, fortunately, he has not yet struck the lead.

The proximity of the Hawaiian Islands to the Pacific coast, their importance to us commercially and strategically, and the rapid disappearance of the Kanaka race make it safe to predict that they will be absorbed into the Union at no very distant date.

Very truly yours,

ARTHUR C. HEFFENGER, M. D., U. S. N.

UNITED STATES STEAMSHIP LACKAWANNA, }
March 21, 1883.

— Of the 1865 visits made during the last quarter by the night medical service in Paris 55 were upon cases of croup, 9 of choleraic diarrhoea, 24 of strangulated hernia, 67 of abortion, 258 of parturition, 69 of convulsions, 69 of hæmorrhage, 39 of fracture or dislocation, 14 of burns, 15 of poisoning, 2 of suicide, and 1 of hydrophobia.

¹ Honolulu. Sketches of Life in the Hawaiian Island.

PRAGUE.

BOSTON, June 18, 1883.

DEAR SIR,—At this season of the year, when so many of your readers are about starting on a European trip, a few facts concerning the advantages for the study of obstetrics in the city of Prague may not prove uninteresting.

As every one knows, there is located there one of the finest lying-in hospitals in the world,—a hospital in which more than three thousand cases are treated yearly. To this hospital students are freely admitted, and Americans especially receive a cordial welcome. The cases as they are received are equally divided among three clinics, two of which are open to physicians and students, the remaining one being reserved for the instruction of midwives.

The *modus operandi* of gaining entrance to the hospital is extremely simple, the expense attending the process ridiculously small, and the opportunities offered disproportionately great. One has merely to visit the first assistant of either clinic and say that he desires to study in his wards. He writes a request to the Herr Director to assign a bed in the caserne, a fee of ten florins is paid, and the applicant is free to come and go as he likes. Besides this, one is of course expected to pay the professor or the assistant something for the privilege, and this is done by taking a private course of lectures and demonstrations, at a maximum cost of twenty-five florins (ten dollars).

The payment of the ten florins mentioned above is for the privilege of occupying a bed in the students' room. Here one can live quite comfortably, being called to every case by means of an electric bell connecting with the delivery ward. One bell indicates a case to examine, two bells a delivery, and three bells some abnormal or operative case.

In the delivery ward it is allowable to examine every case with as much minuteness and as frequently as desired. One can take charge of the delivery in any or as many cases as he may see fit. Opportunities are had to apply forceps and to do the other *ordinary* obstetric operations.

It may be remarked by some that the number of cases to be seen in Vienna is much larger. True, but when it is remembered that in Prague one has not to contend with a large number of students, each eager to get the best place when any interesting case is to be seen, and each trying to bribe a little higher than any one else in order to obtain some advantage over his fellows, it will be evident that all the advantages are not on one side.

In closing I desire to call particular attention to the fact that, in consequence of the increased influx of foreigners during the latter part of the summer, it has been decided to give one or more courses of lectures on operative and clinical obstetrics in the *English language*. Dr. Rubeska, first assistant in the obstetrical clinic of Professor Streng, will give such a course at such time as the number of English-speaking students shall warrant it, probably about the middle of August. At about the same time Dr. Michl, first assistant of Professor Weiss, will give an English course on surgery.

I take great pleasure in recommending these two gentlemen as highly competent instructors, genial companions, and as sufficiently proficient in our own language to make their courses extremely interesting and valuable to any who may desire to make a study of those particular branches.

Hoping that these few facts, thus briefly stated, may prove of interest and perhaps of benefit to some,

I remain, dear sir, very sincerely yours,

RUFUS A. KINGMAN, M. D.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JUNE 15, 1883, TO JULY 6, 1883.

TILTON, HENRY R., major and surgeon. Granted leave of absence for four months. Paragraph 7, S. O. 136, A. G. O., June 14, 1883.

GORGAS, W. C., first lieutenant and assistant surgeon. The leave of absence granted in paragraph 5, S. O. 51, C. S., Department of Texas, extended one month. S. O. 63, Military Division of the Missouri, June 19, 1883.

WYETH, M. C., first lieutenant and assistant surgeon. Assigned to duty at Fort Maginnis, M. T. Paragraph 2, S. O. 103, Department of Dakota, June 14, 1883.

SMART, CHARLES, major and surgeon. Assigned to duty in the office of the Surgeon-General United States Army, and in addition to his duties in the Surgeon-General's office will continue to serve as a member of the National Board of Health. Paragraph 8, S. O. 147, A. G. O., June 27, 1883.

BLAIR, VICTOR, captain and assistant surgeon. Assigned to duty as post surgeon at Fort Sisseton, D. T. Paragraph 1, S. O. 102, Department of Dakota, June 13, 1883.

WINNE, CHARLES K., captain and assistant surgeon. Assigned to duty as post surgeon at Fort Winfield Scott, California. Paragraph 1, S. O. 69, Department of California, June 19, 1883.

WORTHINGTON, JAMES C., captain and assistant surgeon. Assigned to duty at Cantonment on the Uncompahgre, Colorado. Paragraph 4, S. O. 128, Department of the Missouri, June 21, 1883.

EVERTS, EDWARD, first lieutenant and assistant surgeon. Relieved from duty at Fort Coeur d'Alene and assigned to duty as post surgeon at Fort Lapwai, Idaho. S. O. 81, Department of the Columbia, June 14, 1883.

STRONG, NORTON, first lieutenant and assistant surgeon. Relieved from operations of paragraph 2, S. O. 42, C. S., Department of the Platte, and assigned to duty with Battalion Infantry now on duty between Forts Thornburgh and Bridger, Wyoming. Paragraph 2, S. O. 83, Department of the Platte June 21, 1883.

HEGER, A., major and surgeon. Relieved from the further operation of paragraph 9, S. O. 35, C. S., Department of Texas, and will return to his station, Fort Clark, Texas. Paragraph 2, S. O. 69, Department of Texas, June 25, 1883.

HAVARD, VALERY, captain and assistant surgeon. Assigned to duty with expedition to complete the survey of the country west of the Rio Pecos, Texas. Paragraph 8, S. O. 68, Department of Texas, June 22, 1883.

RAYMOND, HENRY L., first lieutenant and assistant surgeon. Granted leave of absence from July 14, 1883, to September 1, 1883, with permission to go beyond sea, and resignation accepted to take effect September 1, 1883. S. O. 150, A. G. O., June 30, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE TWO WEEKS ENDING JULY 7, 1883.

KERSHNER, E., surgeon, detached from the Navy Yard, New York, July 1st, and ordered to the Receiving Ship Colorado, New York.

CRAIG, T. C., assistant surgeon, detached from the Colorado, July 1st, and ordered to the Naval Hospital, New York.

BRYAN, J. H., assistant surgeon, detached from the Naval Hospital, New York, and ordered to the Museum of Hygiene, Washington, D. C.

HENEBERGER, L. G., passed assistant surgeon, detached from the Museum of Hygiene and ordered to the Navy Yard, New York.

BRANSFORD, J. T., passed assistant surgeon, detached from special duty, Washington, D. C., and ordered to temporary duty at the Naval Academy, Annapolis, Md.

LEACH, T. W., medical inspector, detached from the U. S. S. Tennessee, and as Fleet Surgeon of the North Atlantic Station and placed on sick leave.

RHOADES, A. C., medical inspector, detached from the Naval Academy and ordered to the U. S. S. Tennessee and as Fleet Surgeon of the North Atlantic Station.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 30, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	716	392	34.16	9.98	23.65	3.41	1.71
Philadelphia.....	846,984	430	191	13.22	2.55	—	3.94	4.87
Brooklyn.....	566,689	333	177	40.53	7.51	29.72	3.60	2.70
Chicago.....	503,304	216	123	41.67	6.95	26.39	5.09	3.24
Boston.....	362,535	143	53	29.37	6.29	10.20	8.39	3.50
St. Louis.....	350,522	172	96	32.53	8.13	16.85	5.23	4.65
Baltimore.....	332,190	188	112	37.77	4.79	8.51	3.19	3.19
Cincinnati.....	255,708	108	52	22.94	2.75	11.92	—	4.55
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	—	—	—	—	—	—	—
Pittsburg.....(1883)	175,000	70	36	34.27	7.14	17.14	7.14	5.71
Buffalo.....	155,137	24	11	12.48	4.16	8.32	—	4.16
Milwaukee.....	115,578	47	34	12.77	6.38	4.26	4.26	—
Providence.....(1883)	116,755	55	21	14.54	7.27	10.91	1.82	—
New Haven.....(1883)	73,000	15	7	6.66	—	—	—	—
Charleston.....	49,999	25	10	16.00	—	8.00	4.00	—
Nashville.....	43,461	18	8	44.44	—	27.77	—	—
Lowell.....	59,485	31	14	3.22	3.22	—	—	—
Worcester.....	58,295	19	12	31.56	5.26	15.78	5.26	—
Cambridge.....	52,740	20	6	35.00	5.00	10.00	20.00	—
Fall River.....	49,006	14	3	14.28	21.42	7.14	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	6	3	33.33	16.66	—	—	—
Springfield.....	33,340	15	4	26.66	6.66	13.33	6.66	—
Salem.....	27,598	9	2	11.11	—	—	—	—
New Bedford.....	26,875	13	7	14.54	7.27	—	—	7.27
Somerville.....	24,985	5	2	40.00	—	—	40.00	—
Holyoke.....	21,851	11	8	63.63	—	63.63	—	—
Chelsea.....	21,785	7	3	28.56	—	14.28	—	—
Taunton.....	21,213	5	0	—	—	—	—	—
Gloucester.....	19,329	6	2	16.66	—	—	—	—
Haverhill.....	18,475	—	—	—	—	—	—	—
Newton.....	16,995	1	0	—	—	—	—	—
Brockton.....	13,608	3	0	—	—	—	—	—
Newburyport.....	13,537	4	1	50.00	—	25.00	—	25.00
Fitchburg.....	12,405	4	0	—	—	—	—	—
Malden.....	12,017	—	—	—	—	—	—	—
Nineteen Massachusetts towns.....	140,512	38	12	13.15	7.26	—	2.63	2.63

Deaths reported 2771 (no reports from New Orleans and District of Columbia): under five years of age 1402: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 834, diarrhoeal diseases 489, consumption 303, lung diseases 187, diphtheria and croup 111, scarlet fever 81, measles 49, typhoid fever 36, malarial fevers 21, cerebro-spinal meningitis 15, whooping-cough 15, erysipelas eight, puerperal fever six, small-pox three. From *measles*, New York 18, Boston and Baltimore five each, Brooklyn four, Chicago and Nashville three each, Philadelphia, St. Louis, Pittsburg and Lynn two each, Cincinnati, Worcester, and Chelsea one each. From *typhoid fever*, Philadelphia eight, Chicago seven, New York five, Brooklyn, Boston, St. Louis, and Cincinnati two each, Baltimore, Pittsburg, Lowell, Fall River, Salem, New Bedford, Gloucester, and Westfield one each. From *malarial fevers*, New York eight, Brooklyn seven, St. Louis three, Chicago, Baltimore and Charleston one each. From *cerebro-spinal meningitis*, New York, Chicago, Baltimore, and Milwaukee two each, Philadelphia, Boston, Providence, New Haven, Worcester, Peabody, and Milford one each. From *whooping-cough*, New York four, Philadelphia and Baltimore three each, Brooklyn and Chicago two each, St. Louis one. From *erysipelas*, New York four, Philadelphia two, St. Louis and Cincinnati one each. From *puerperal fever*, Cincinnati two, Philadelphia, Boston, Baltimore, and Cambridge one each. From *small-pox*, Philadelphia two, St. Louis one.

Twenty-nine cases of small-pox were reported in St. Louis, Buffalo three, Baltimore one; measles 54, scarlet fever 21, diphtheria 19, and typhoid fever four in Boston; scarlet fever five, and diphtheria three in Milwaukee.

In 29 cities and towns of Massachusetts, with an estimated population of 936,023 (estimated population of the State

1,922,530), the total death-rate for the week was 16.49 against 16.97 and 21.06, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending June 16th, the death-rate was 18.7. Deaths reported 3083: acute diseases of the respiratory organs (London) 203, measles 105, scarlet fever 75, diarrhoea 68, whooping-cough 62, fever 32, diphtheria 22, small-pox (London three, Hull and Newcastle one each) five. The death-rates ranged from 12.2 in Norwich to 26.5 in Newcastle-on-Tyne; Leicester 14.9; London 16.9; Brighton 18.8; Cardiff 19.7; Sheffield 20.1; Liverpool 23.5; Manchester 26. In Edinburgh 16.8; Glasgow 30.6; Dublin 23.4.

For the week ending June 16th, in 168 German cities and towns, with an estimated population of 8,553,682, the death-rate was 28.3. Deaths reported 4654; under five years of age, 2394; consumption 651, lung diseases 510, diarrhoeal diseases 247, diphtheria and croup 154, measles and rhelein 116, scarlet fever 70, typhoid fever 43, whooping-cough 39, puerperal fever 23, small-pox (Heilbronn two, Danzig, Bromberg, Spandau, and Frankfurt one each), six, typhus fever (Frankfurt on M. one) one. The death-rates ranged from 13 in Braunschweig to 38.8 in Cologne; Königsberg 28.3; Breslau 38.6; Munich 37.3; Dresden 25.8; Berlin 33.7; Leipzig 31.5; Hamburg 27.3; Frankfurt on M. 26.2; Metz 18.6.

For the week ending June 16th, in the Swiss towns, there were 28 deaths from consumption, diarrhoeal diseases 22, lung diseases 15, measles seven, typhoid fever seven, diphtheria and croup four, whooping-cough two, erysipelas two, puerperal fever one. The death-rates were at Geneva 11.3, Zurich 14, Basle 16.7, Berne 30.5.

The meteorological record for the week ending June 30th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
June, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 24	29.998	74	88	64	66	54	76	65	W	O	SW	3	0	5	C	C	C	—	—
Mon., 25	30.054	72	84	64	71	38	78	62	SW	S	SE	6	11	—	C	C	C	—	—
Tues., 26	30.110	61	70	55	100	90	98	96	E	E	E	5	12	6	R	O	O	—	—
Wed., 27	30.050	61	67	57	93	93	100	95	SE	E	E	2	12	14	O	O	O	—	—
Thurs., 28	29.901	73	85	56	97	52	90	79	S	SW	SW	12	10	11	O	C	C	—	—
Fri., 29	29.811	75	86	65	84	63	90	79	SW	SW	SW	5	12	5	O	C	C	—	—
Sat., 30	29.829	65	79	59	76	73	65	71	W	E	NW	8	10	14	F	C	C	—	—
Means, the week.	29.965	69	88	55				78										9.28	1.29

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

FISKE FUND.

THE Trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, held at Providence, June 21, 1883, announced that they had made no award on the subjects proposed for the present year.

They propose the following subjects for the year 1884:—

(1.) The Origin and Progress of the Malarial Fever now prevalent in New England.

(2.) Original Investigations in Household Hygiene.

For the best essay on either of these subjects worthy of a premium they offer the sum of three hundred dollars.

Every competitor for a premium is expected to conform to the following regulations, namely:—

To forward to the Secretary of the Trustees, on or before the first day of May, 1884, free of all expense, a copy of his dissertation, with a motto written thereon, and also accompanying it a sealed packet, having the same motto inscribed upon the outside, and his name and place of residence within.

Previously to receiving the premium awarded the author of the successful dissertation must transfer to the Trustees all his right, title, and interest in and to the same for the use, benefit, and behoof of the Fiske Fund.

Letters accompanying the unsuccessful dissertations will be destroyed by the Trustees, unopened, and the dissertations may be procured by their respective authors if applications be made therefor within three months.

JOB KENYON, M. D., River Point,
OLIVER C. WIGGIN, M. D., Providence,
HORACE G. MILLER, M. D., Providence,
Trustees.

CHARLES W. PARSONS, M. D., Providence,
Secretary of the Trustees.

TRI-STATE MEDICAL ASSOCIATION.

THE ninth annual meeting of the Tri-State Medical Association will be held in Indianapolis, September 18th, 19th, and 20th. The work is already far advanced, and the title of each paper should be sent in at once. Papers must not exceed twenty-five minutes.

It is also the rule that each physician who registers must be a member of a local or State society in good repute. All such are invited.

Notice of papers or cases to be presented may be sent to the Chairman of the Committee on Programme, Dr. J. L. Thompson, Indianapolis, to the Secretary, Dr. G. W. Burton, Mitchell, Ind., or to the President, Dr. William Porter, St. Louis.

St. Louis, June 29, 1883.

ERRATUM.—Page 589, second column, of JOURNAL, June 21st, in Dr. Johnson's reply to a toast, for "higher rational education" read "higher medical education."

APPOINTMENTS.—Thomas Dwight, M. D., has been appointed Professor of Anatomy in the Harvard University Medical School.

Drs. C. M. Green and Robert B. Dixon have been appointed Assistant Physicians to the Boston Lying-In Hospital.

THE honorary degree of M. A. has been conferred upon Dr. Henry A. Martin by Dartmouth College.

BOOKS AND PAMPHLETS RECEIVED.—Handbook for Hospitals. No. 32. State Charities' Aid Association. New York. G. P. Putnam's Sons. 1883.

The Forty-Fourth Annual Report of the Superintendent of the Boston Lunatic Hospital to the Board of Directors for Public Institutions. For the Year ending April 30, 1883.

Constituents of Tubercles, and Explanations regarding Them. By Rollin R. Gregg, M. D.

Woman's Medical College of Pennsylvania, Philadelphia. Annual Announcement, May, 1883.

Army Hospital Services Inquiry Committee. Report of a Committee appointed by the Secretary of State for War to inquire into the Organization of the Army Hospital Corps, Hospital Management, and Nursing in the Field, etc. Presented to both Houses of Parliament by command of Her Majesty. London. 1883.

Hospitals, Infirmarys, and Dispensaries. Their Construction, Interior Arrangement, and Management. With Descriptions of Existing Institutions and Seventy-Four Illustrations. By F. Appert, M. D., M. R. C. P. L. Second Edition, Revised and Enlarged. London: J. & A. Churchill. 1883.

How can we Obtain and Preserve the Best Eyesight and Hearing? A Paper read before the Sanitary Convention at Greenville (Mich.), April 11, 1882. By Leartus Connor, A. M., M. D., of Detroit. (Reprint.) 1882.

Catalogue of the Albany Medical College. Medical Department of Union University. Fifty-Second Session. 1882-83. Albany. 1883.

Du Diagnostic de l'Ectopie Rénale. Par le Dr. Frédéric Buret. Publications du Progrès Médical. Paris. 1883.

Cases from Practice. By H. V. Sweringen, M. D., Fort Wayne, Indiana. (Reprint.) 1883.

Ninth Annual Announcement of Columbia Medical College, of Columbus, Ohio. Session of 1883-84.

Twenty-Third Annual Announcement of the Bellevue Hospital Medical College, 1883-84.

A Treatise on the Diseases of the Eye. By J. Soelberg Wells, F. R. C. S., Doctor of Medicine of the University of Edinburgh, etc. Fourth American from the Third English Edition, with Copious Additions. By Charles Stedman Bull, A. M., M. D. Philadelphia: Henry C. Lea's Son & Co. 1883.

Fifth Annual Report of the State Board of Health of the State of Rhode Island for the Year ending December 31, 1882. Including the Report upon Births, Marriages, and Deaths in 1881. Providence. 1883.

Wood's Library of Standard Medical Authors. The Diseases of Women. A Manual for Physicians and Students. By Heinrich Fritsch, M. D. Translated from the German by Isidor Furst. With 159 Wood Engravings. New York: William Wood & Co. 1883.

The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery by authors of Various Nations. Edited by John Ashurst, Jr., M. D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated. In Six Volumes. Vol. III. New York: William Wood & Co. 1883.

Lectures.

CLINICAL LECTURE ON SOME OF THE CAUSES OF STERILITY, AND THEIR TREATMENT.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY T. GAILLARD THOMAS, M. D.,

Clinical Professor of Gynaecology.

GENTLEMEN, — Three cases of sterility having presented themselves by accident at the clinic to-day, I will avail myself of the opportunity to give you a practical illustration of some of the causes and of the treatment of this condition. If your experience when you are in practice is anything like what mine has been, however, you will undoubtedly find that in general the results of the treatment of sterility are very unsatisfactory. Perhaps out of twenty cases you may have one or two successes, and your professional neighbors may be led to form a high opinion of your skill, because you will be sure to publish the one or two successes, but will take good care not to say anything about the eighteen or nineteen failures. In a London review of one of the editions of my work on diseases of women, the opinion was expressed that it showed an extraordinary barrenness of results in the treatment of sterility, and that these were much better on the other side of the water. Yet if one were to examine into the methods resorted to there it would be found that precisely the same means were employed which were recommended in my book.

There is only one way in which any success whatever can be achieved in the treatment of this troublesome affection, and that is to study each particular case on its own merits, and thus avoid the grievous error of falling into any routine method.

In doing this one will sometimes find that there is some constitutional ailment in the husband which prevents conception; in other cases, that although there is no constitutional trouble, the local results of a specific urethritis give rise to the difficulty, and in others, again, that the husband is impotent.

The first patient that I bring before you is Mrs. J., who is twenty-seven years of age, and has been married eight years, but has never been pregnant, although she is anxious to have children. She says that she enjoys good health, with the exception of having more or less pain in her head and back, and marked irregularity in her monthly sickness. Her menses come on only once in every three or four months, and the flow is even then very scanty, at the most lasting only twenty-four hours; while it is accompanied by very severe bearing-down pain. She also suffers considerably from leucorrhœa.

From the above history we can say at the outset that it looks as if there were something wrong about the woman herself, rather than her husband, which prevents her from bearing children. The results of a physical examination are as follows: The patient having been placed on the back and the finger passed up into the vagina, it was found that the cervix was in its normal position, but the moment it was touched it was ascertained that there was something peculiar about it. The os, instead of being of the natural size, was only that of a small pin-hole. The finger was now carried up higher and a mass was found behind the cervix

pressing upon the rectum. By conjoined manipulation it was ascertained that the body of the uterus was absent from its natural position, and the patient then being placed upon her side and a Sims speculum introduced, a very small probe, bent backward, was passed down into the uterine cavity. It was thus demonstrated beyond a question that the mass back of the cervix was the body of the uterus, which was in a state of marked retroflexion. We have found, therefore, an ample explanation of the sterility in this case. It is true that many women suffering from retroflexion do bear children (though they generally have one or two miscarriages first), but when this is the case, you will not find the os in the condition which we have noted here.

In answer to special inquiries, the patient informs me that she did not begin to menstruate until she was eighteen years of age, and that she had to have the mouth of the womb opened by a slight operation. In these cases of narrow cervix the blood gets dammed up, causing great pain, which is at length relieved by the expulsion of a small clot. After a time, as the result of this repeated damming up of blood in the uterine cavity, the organ becomes retroflexed. We then have an additional factor in the production of dysmenorrhœa, because the bending of the uterus gives rise to spasmodic spasm of the sphincter muscular fibres of the cervix, and spasmodic dysmenorrhœa is thus added to the obstruction. We have, therefore, three causes for the trouble in this case: First, a narrow cervix, preventing a free egress of menstrual blood and causing a "halooning" of the uterus at every period; second, retroflexion, occasioning spasm of the cervical muscle; and, third, a constant engorgement of the uterus with blood, resulting in the production of uterine catarrh.

Before referring to the treatment appropriate here, I would warn you never to promise a cure in such a case as this. Simply tell your patient that you see a number of conditions which appear to prevent pregnancy, that you think you can remove them, and that when this has been done the chances are that her dysmenorrhœa will be relieved, and that she will bear children. The treatment must consist in overcoming the chain of morbid conditions discovered, the narrow cervix, the bent uterus, the uterine spasm, and the uterine catarrh. It would be better, however, not to commence their removal in the order in which they have occurred. Such a patient should enter the hospital, and, having been put to bed, should be treated first of all with the hot water douche and laxatives. Then three times a week the uterus should be restored to its normal position by means of the sound. It is probable that her next menstrual period would be less painful than heretofore, and at the end of it the cervix should be held with a tenaculum, and three incisions, each cutting the sphincter muscle to the depth of one eighth of an inch, should be made with the Sims' knife. This having been done thoroughly, a glass stem should be pushed up into the uterus and maintained in position by means of an Albert Smith pessary (provided with a little cup in which the lower extremity of the stem can rest), which will also keep the uterus in position. After the operation the patient should be placed in bed and given an opiate. She should remain in bed for ten or twelve days, and have a carbolized vaginal injection three times a day. The glass stem may be kept in the uterus until after the next menstrual

¹ Reported for the Boston Medical and Surgical Journal.

period if it is thought desirable; but it should at all events be taken out then. By this time it will probably be found that the uterine engorgement has disappeared and the leucorrhœa has diminished; while the unnatural narrowness of the cervix has been removed entirely. (The glass stem should be somewhat larger than the normal canal.)

The patient can then be allowed to go home wearing the stem and Albert Smith pessary. Twice a week the stem should be removed, and a probe wrapped in cotton dipped in pure carbolic acid passed up to the fundus. This application, which covers the mucous membrane with a whitish coating, can be made in the office. It is accompanied with no danger whatever, and I regard the carbolic acid as of much more service than iodine, zinc, or alum when used in this way. In from six months to a year the glass stem might be left off, and there would then be a chance of impregnation. It would be only a chance, you must remember, but I know of no better plan of treatment than that of which I have now given you the outline. Our premises here, I think, are undoubtedly correct, as I have seen the same conditions in hundreds of cases. In this particular instance, however, I should not feel very hopeful of overcoming the sterility for the reason that the facts that the patient did not commence to menstruate until she was eighteen and that the flow only comes on every three months naturally make me suspect that the ovaries may be at fault as well as the uterus.

Our next patient is Mrs. Elizabeth L., born in Germany, and nineteen years old. She has been married four years, and has never had any children, but thinks she had one miscarriage. She complains of pain in the region of both ovaries, which begins four days before the menstrual flow, continues through it, and lasts for a day or two after it disappears. She also suffers from the pain in the top of the head, which has been called uterine headache, and says she has never felt well since she had the miscarriage, which occurred about a year after her marriage.

Each case of sterility must be studied by itself, and this is of an entirely different character from the last. When a vaginal examination was made here the finger failed to reach the cervix in its normal positions, but it was afterwards found much higher up than it ought to have been, while a mass continuous with this was found pressing down upon the rectum. The introduction of the probe showed that this was the retroverted uterus, the axis of the organ being completely changed. From the os uteri could be seen, through the speculum, a plug of viscid mucus hanging, looking like white of egg, and so tenacious that it was difficult to cleanse the cervix. When the mucus was removed a condition was observed beneath resembling that of granular lids, and the surface bled freely when touched with the small, dry sponge used to cleanse it. Both ovaries were enlarged to twice the normal size.

Here is a young woman who was perfectly well up to the time of a miscarriage, occurring a year after her marriage. She very likely got up on the third or fourth day, and in all probability, unfortunately, with the consent of her physician, if she had one. The uterus being heavy fell over backwards, and the ligaments were pulled upon, the traction on the broad ligaments preventing the return of venous blood. The pathological chain in this case is, then, retroversion with engorgement of the uterus, endo-metritis, chronic inflammation of the Nabothian follicles, and sym-

thetic engorgement of the ovaries. It is estimated by Tyler Smith that there are two thousand mucous follicles in the cervix, and it is a question whether chronic inflammation of these is ever cured.

The treatment that I would advise here would be to restore the uterus to its normal position, and put in a retroversion pessary, after which the mucus should be carefully removed from the whole uterine tract two or three times a week, and the surface painted over with pure carbolic acid. Within the os internum this is undoubtedly the safest as well as the best application, and I know of no other chemical which, thus applied, is not liable to produce pelvic cellulitis or peritonitis occasionally. Judging from my past experience, however, I should pronounce this even a more doubtful case than the other, as the sterility depends upon a cause well nigh incurable.

Our last patient to-day is Mrs. Rose G., twenty-four years old, and a native of Austria. She has been married six years, but has never been pregnant, and it is on account of her sterility that she comes to consult us. She is regular in her monthly periods, but sometimes they are accompanied with much more pain than at others.¹ The flow lasts from four to six days. When the finger was introduced into the vagina the cervix was found to be long and conical, and the os very small. There was no leucorrhœa or other abnormal condition. The probe was passed with great difficulty on account of the small size of the os, and I have no doubt that in this case the peculiar formation of the cervix is the cause of the sterility. It is a cause which has been recognized by every writer within the last few years, and I think that our patient can, probably, be entirely cured.

In aggravated cases of this kind, where the neck projects very markedly, and is decidedly conoidal, amputation of the cervix is required, but in the present instance I think the cervix hardly long enough for this, and would advise the operation by bilateral incisions for its enlargement. If this should be done it is highly probable that impregnation would result, but it is by no means a certainty. I have thus been able to present to you some cases illustrating a few of the numerous causes of sterility, and it gives me pleasure to conclude with one in which it is possible to make a little better prognosis than in the other two.

Original Articles.

CASES IN PRACTICE.²

BY GEORGE STEDMAN, M. D.

TWO CASES OF ABORTION, ONE PRESENTING UNUSUAL DIFFICULTIES IN THE POST MORTEM, THE OTHER IN THE ANTE MORTEM DIAGNOSIS OF THE CAUSE OF DEATH. A CASE OF LAUDANUM POISONING IN AN INFANT ONE DAY OLD. RECOVERY.

THE following cases seem to me of interest: the first showing the difficulty in determining the exact

¹ It is curious how greatly the pain suffered by women during menstruation varies at different times and under different circumstances. Some women who have dysmenorrhœa at the sea-shore are free from it in the mountains, and *vice versa*, and I have known ladies from Cuba who suffer from it here, but not at home. When the system is in a depreciated condition from malaria or other cause dysmenorrhœa is liable to occur in those who are at other times free from it.

² Read before the Boston Society for Medical Observation, March 19, 1883.

cause of death, and consequently the uselessness of commencing a prosecution, although there being a moral certainty that the death was caused by an attempt at criminal abortion, the second case being also a case of undoubted criminal abortion, but presenting difficulties in the way of diagnosis to the attending physician.

October 30, 1882, I was acting as medical examiner in the northern district of Suffolk County, and was summoned at about six o'clock in the afternoon to attend a case of sudden death. I immediately answered the call, and was directed to the office of a certain doctor, where I found lying upon the lounge the dead body of a young woman. In answer to my questions the doctor told me that he did not know who she was or where she belonged; that he had never seen her but once before, when, about ten days previously, she had come to his office, and, upon her complaining of "past menses," he had prescribed a simple remedy of aloes and iron; that he had not again seen her until the day of her death, when, about four o'clock in the afternoon, she appeared at his office, and, coming in, immediately began to complain of dizziness. He laid her upon the lounge, fanned her, and offered water to her, but she could not swallow. He called in assistance, but all to no purpose; the woman died within half an hour after entering the office.

The body was removed to the morgue and placed upon ice; the autopsy was made the following morning by Dr. W. F. Whitney and myself, the microscopical examination being made by Dr. Whitney.

Autopsy eighteen hours after death.

Inspection. Rigor mortis present. Lividity of dependent portions of the body. Fatty tissue well developed.

Hymen absent.

Fourchette intact. Slight brown line from umbilicus to pubes.

Section. Blood everywhere in the body fluid and dark.

Skull thin.

Brain and Membranes. Veins of pia mater much injected. Brain substance firm. Puncta cruenta very abundant. Brain otherwise normal.

Diaphragm at fifth space.

Pericardium contained normal amount of fluid.

Heart. Both sides of the heart distended with dark fluid blood; bubbles of gas mixed with blood issued from the right side. Heart's substance and valves normal.

Pleura. One ounce serum in each cavity.

Right Lung bound to chest by old adhesions. Lungs did not fully collapse upon removal. Lower lobes darker in color and more distended than the upper. On section considerable quantity of fluid mixed with air issued from cut surface. Lower lobes contained more of this than the upper. Microscope showed blood-vessels to be filled with excessive amount of blood. Alveoli filled with serum and a few desquamated cells.

Kidneys normal, dark red; cortex and pyramids not sharply differentiated. Microscope showed blood-vessels to be filled with excessive amount of blood. Slight increase of interstitial tissue.

Spleen normal in size; dark red in color, firm; follicles distinct.

Pancreas and *supra-renal capsules* normal.

Stomach contained large amount of fluid and undigested food. Surface slightly reddened.

Intestines filled with dark faeces, in which were small yellowish lumps and seeds (lemon). Follicles of large intestine very prominent. Small intestine presented no unusual appearance except an increased redness of inner surface of duodenum at about its middle.

Contents of stomach and intestines retained for chemical analysis, and delivered to Dr. W. B. Hills.

Liver normal in size and color. Increase of blood in portal system.

Bladder normal, contracted, and empty.

Peritoneum normal.

Uterus size of man's fist; mouth slightly excoriated and patulous; cervical canal large, and comparatively small amount of mucus in it.

Cavity of uterus contained an embryo within its membranes of about the eighth to tenth week. Lying free in the cavity of the decidua was a fresh dark clot the size of the little finger; entangled in its meshes was a piece of choroid and decidua. In right ovary was a body the size of a cherry, bright yellowish in color, with a central translucent portion.

Diagnosis. General venous congestion; œdema of lungs; pregnancy of about the eighth to tenth week; ante-mortem hæmorrhage from laceration of the decidua.

Dr. Hills's report of his analysis of the contents of the stomach and intestines was negative as to the cause of death.

In the above account there certainly seems no really sufficient cause for death. All that can be said is that there was evidence of recent instrumental interference with the pregnant uterus; that this interference was doubtless intended to produce an abortion, and was the probable cause of death.

The second case was that of a young woman belonging in the Provinces, and who had recently arrived in Boston after a long and tedious sea-voyage. She was attended by Dr. George W. Galvin, who was called in on Thursday, February 1, 1883. He found her in bed, complaining of pain in the bowels, which she attributed to her constant vomiting while on the boat from Halifax to Boston. There was little tenderness and no tympanites. Pulse 84. She said she had menstruated somewhat profusely three days previously. There had been no chill, rigor, or fever, and considering the pain and tenderness due to the long-continued retching she was ordered an opiate and hot fomentations to the bowels. On February 4th, the bowels not having moved for several days, a cathartic of aloes and rhubarb was ordered, and this not operating an enema of warm water and turpentine was given; this also failing to produce the result desired opiates were again resorted to, together with warm applications. The patient was kept comfortable by these means for two days, and again injections and cathartics were resorted to, but without relief.

Vomiting commenced, the vomitus at first being composed apparently of gastric juice and bile, but the vomiting continued to increase in force until Thursday evening February 8th, when the matter vomited began to become darker in color and somewhat offensive until on Friday the vomitus was distinctly fecal. Drs. Harding and Stedman were called in to see the case, at which time the patient was very weak and still occasionally vomiting fecal matter. There was some tympanites, but not specially marked; also some abdominal tenderness.

There seemed to be a comparative dullness on percussion in the right iliac region, but very little tenderness shown by percussion or palpating. The patient died on the following night.

On section of the abdomen no intestinal obstruction was discovered, but there was a general peritonitis with pus formation.

The uterus was about the size of a pregnant uterus of about two and a half months.

Section of the uterus showed that it had recently contained an embryo, that there were evidences of the probable introduction of an instrument of some kind into the uterus, and that the peritonitis had been caused by the passage of irritating matter from the uterus through the Fallopian tubes to the peritoneal cavity.

The specimens were shown to Dr. F. W. Draper, under whose jurisdiction as medical examiner the case would come, and he agreed with me that the evidence of criminal malpractice was not sufficiently positive to warrant a prolonged official investigation.

In this case the symptoms so clearly pointed to intestinal irritation, with obstruction as a possible and perhaps probable cause, that the condition of pregnancy was overlooked, and not suspected until the time of the autopsy.

Although the following case has no connection with the former two, nevertheless I thought it might be of some interest as showing how persistent perseverance may sometimes be crowned by success.

On December 15, 1882, I was called to attend Mrs. G. in confinement. The labor was somewhat tedious, but progressed normally, and an eleven-pound boy was born. There was some difficulty in delivering the placenta, it being partially attached. This I afterward learned had also occurred at a previous confinement. Everything went on as well as could be expected, the mother being very much debilitated from too frequent pregnancies, she having had five children in a little over nine years. On the following day I was called at five o'clock in the morning to see the baby.

When I arrived at the house the baby was in a very severe convulsion, and I learned that at about three o'clock it had received an unknown quantity of laudanum—say several drops. The usual remedies were administered, such as mustard applications, warm baths, and coffee, but when the convulsive movements ceased the child also ceased to breathe and lay as if dead. I applied the stethoscope to the heart and found that it was beating very slowly and irregularly as follows: one—two, — one — two, — one — two, — one — two. I immediately commenced artificial respiration, and after a few moments again applied the stethoscope and heard the heart beating faster and regularly as follows: one, two, three, four, five, six, seven, eight, nine, ten, yet the child did not breathe, and I was encouraged to continue employing artificial respiration; finally the child gasped and commenced to breathe naturally. Everything went on nicely for about ten minutes, when the same proceedings were repeated, and after a few moments the child again breathed, and again in ten minutes there was another convulsion. I attempted to start up the respiration by the same means, namely, by placing my left hand to the back with the thumb and fingers in the axillæ, while with the right hand I grasped the thighs and legs, and by alternately extending and flexing the body of the child endeavored to pump air into the lungs. This time I was unsuccessful in restoring respiration, and I again lis-

tened with the stethoscope, and finding the heart's action failing I laid the child on the lap of an attendant, turned its head back as far as possible so as to clear the œsophagus, held the nose with the thumb and forefinger of the right hand, while I filled the lungs by blowing into the mouth, evacuating the air by compressing the abdomen and lower ribs with the left hand. The child breathed again. I now applied the stethoscope to the chest, and heard moist râles throughout the lungs, and with the idea of diminishing the amount of œdema I applied leeches, one over the sternum, and one to each side, and with the idea of diminishing a probable œdema of the brain one leech was also applied to the nape of the neck. The leech-bites were encouraged to bleed by application of warm-water cloths, and I calculated that nearly three ounces of blood was taken. I again listened, and discovered a marked diminution in the amount of fluid in the lungs, and it was noticed that the convulsions came less frequently; instead of every ten or fifteen minutes they occurred every twenty minutes, and then every half hour until three o'clock the following morning, the same process of blowing up being resorted to after each convulsion.

The baby was now pretty thoroughly blown up, the stomach and intestines being much distended; in fact, they could hold no more wind, for every time we blew into the child's mouth there was audible response from "the other end."

At five o'clock I lay down on the lounge by the side of the father, who was holding the child, and gave directions to be called should another convulsion occur. I was called at seven o'clock, but the convulsion was not so severe, and after the convulsive movements had stopped the child commenced to breathe without artificial aid. Brandy and beef tea were given from time to time by the rectum, and at eleven o'clock the following morning the child took the bottle, and convalescence was established.

A NOTE ON THE FÆCES OF STARCH-FED INFANTS.¹

BY N. A. RANDOLPH, M. D.,

Assistant Demonstrator of Physiology in the University of Pennsylvania.

THE series of experiments presented in the preceding paper² by Dr. Keating seems to me to be in the highest degree suggestive, for it is only rational to suppose that the development of the amylolytic ferment of the pancreatic juice is coincident with the appearance of the analogous salivary ferment. Inasmuch, however, as the food even in spoon-fed infants is retained but a short time in the mouth, and further, as the continued action of the saliva after it enters the stomach is as yet problematical, the only absolute control for such observations is afforded by an examination of the fæces.

Through the kindness of Dr. Keating I have been enabled to examine the stools of twenty-four starch-fed infants, of ages varying from forty-five days to eighteen months. Twenty-three of these children were fed upon cracker-dust, water, and condensed milk. The twenty-fourth received corn-starch boiled in milk.

¹ Read before the College of Physicians of Philadelphia, June 6, 1883.

² See page 3 in number of July 12th.

The freshly-evacuated fæces of each infant were carefully bottled and labeled, and a drop of a solution of iodine was added to a small portion of each specimen, which was then submitted to microscopical examination. Besides turning the starch blue, and indicating the presence of dextrine by a peculiar mahogany-red color, the iodine has the advantage of rendering any fats which may be present much more readily apparent. The reaction of each specimen was taken, but though this varied from acid to alkaline and neutral, no correlation between the reactions and the other properties of the specimens could be observed. A decoction of each was tested for glucose with freshly prepared Fehling's solution, but except in one instance no appreciable amount could be found.

The presence of starch was exceptional, and appar-

ently in no degree dependent upon the age of the child. The stools of eighteen out of the twenty-four children contained either no starch or but a trace, that is, no more than is frequent in the evacuations of a healthy adult upon a mixed diet. Six of these specimens were from children of three months or less, the youngest being but forty-five days old. In many cases the broken and empty cellulose envelopes of the starch granules were clearly discernible.

The six infants in whose evacuations a noteworthy amount of starch was present were aged respectively three, four, ten, thirteen, fourteen, and seventeen months. The eldest two were in very bad health.

The following is a tabular statement of the age, diet, and appearances of the fæces in the children forming the subjects of this study.

AN EXAMINATION OF THE FÆCES OF TWENTY-FOUR STARCH-FED INFANTS.

No.	Name.	Age.	Food.	Starch Present.	Remarks.
1	Savin.	45 days.	Condensed milk and cracker dust.	None.	
2	Jocker.	2 months.	Condensed milk and cracker dust.	Traces.	
3	McGettinger.	2+ months.	Condensed milk and cracker dust.	Traces.	
4	McGowan.	3 months.	Condensed milk and cracker dust.	Traces.	Twice examined; no fat before inunction; about ten per cent. after.
5	Ross.	3 months.	Condensed milk and cracker dust.	Traces.	
6	Hays.	3 months.	Condensed milk and cracker dust.	About one fourth starch.	
7	Soy.	3 months.	Condensed milk and cracker dust.	Traces.	
8	Henwich.	4 months.	Corn-starch and milk.	Traces.	
9	Moore.	4 months.	Condensed milk and cracker dust.	None.	Many broken cellulose envelopes. Evidences of potato surreptitiously given.
10	Conway.	4+ months.	Condensed milk and cracker dust.	Traces.	
11	Rosch.	5 months.	Condensed milk and cracker dust.	About one half starch.	
12	Anxier.	5+ months.	Condensed milk and cracker dust.	None.	
13	Schmits.	5+ months.	Condensed milk and cracker dust.	None.	Many bacteria.
14	McKinley.	6+ months.	Condensed milk and cracker dust.	None.	
15	Hall.	8+ months.	Bread and cracker food.	Traces.	Ten per cent. fat; had had inunctions.
16	Hensen.	10+ months.	Condensed milk and cracker dust.	More than normal.	
17	Divine.	18- months.	Condensed milk and cracker dust.	Twenty to thirty per cent.	
18	Croncia.	14- months.	Condensed milk and cracker dust.	Traces.	Many bacteria; evidences of potato surreptitiously given. Some glucose present and indications of dextrine; saliva was found to be inefficient.
19	Madden.	14 months.	Condensed milk and cracker dust.	Traces.	
20	Boyle.	14 months.	Condensed milk and cracker dust.	Ten per cent. starch.	
21	Glass.	14+ months.	Condensed milk and cracker dust.	None.	Sick.
22	Kinscher.	17- months.	Condensed milk and cracker dust.	None.	
23	Wood.	17- months.	Condensed milk and cracker dust.	Over three fourths starch.	Except a few large cells containing starch from potato.
24	Dane.	18 months.	Condensed milk and cracker dust.	Traces.	

The facts presented appear to justify the following conclusions:—

First, that *many* infants of under three months can digest starchy foods.

Second, that the individual variations in this regard are so numerous that no broad and general statement can be made as to the period at which infants *begin* to digest starches; and

Third, that the physician can be absolutely certain that a farinaceous ingredient in the diet of a young infant is beneficial only by an examination of the dejecta under such diet.

After the reading of the preceding paper Dr. Keating spoke of one case in which fat was found in the fæces; cod-liver oil had been administered in the form

of inunctions, and the child fed alone on Borden's condensed milk.

Dr. Randolph replied that he had found ten per cent. of fat in the fæces of a child which was receiving two inunctions of cod-liver oil daily. He was now conducting some experiments upon this subject, and intended to report the results to the College in a communication to be read at a future day.

— Among the important changes in the tariff on drugs which went into effect July 1st is a reduction on chloroform from one dollar to fifty cents per pound, and an increase on preparations of opium from six dollars to ten dollars per pound.

PEPTONIZED MILK AS A CURATIVE AGENT IN ACUTE DYSPESIA.¹

BY JOHN W. BRANNAN, A. B., M. D., OF COLORADO SPRINGS COLORADO.

PHYSICIANS are often baffled and discouraged in attempting to treat a stomach so disordered as to be absolutely intolerant of all food. The various drugs known as digestives are tried in turn, and the most easily assimilable food is given. Milk in small quantities, either alone or with the addition of limewater, is often well borne, and in such cases a favorable result is merely a question of time. But in other cases the stomach, incapable of performing its functions, demands not simply *digestible* food, but food already *digested*.

Physiology has taught us the nature and workings of the digestive ferments of the body, and physiological chemistry has given us the active principles of those ferments. In selecting a food for artificial digestion we may reasonably choose that one which is most easy of natural digestion, that is, milk. The albumen of meat and eggs can be digested artificially by a solution of pepsine and hydrochloric acid, but the process is of five to eight hours' duration, and the resulting product is far from tempting to a fastidious stomach. Milk, however, by the process I am about to describe, can be digested sufficiently in one hour or even less to be readily taken up by the absorbent vessels of the body. Its taste, when thus prepared, is not at all disagreeable. Moreover, milk contains all the proximate principles necessary to the complete nutrition of the body. Of these principles the sugar, water, and saline matters are already in a state fit for absorption. Milk sugar, though not absolutely identical with grape sugar, is closely allied to it, and, according to Pavy, behaves precisely like it in the alimentary canal. We have left then the casein and butter of the milk, the former to be converted into albuminose or peptone, the latter to be emulsified. The pancreatic juice is the only ferment in the body which combines the properties of changing albuminoids into peptones, starch into sugar, and of emulsifying fats. The extractum pancreatis of Fairchild Brothers and Rogers, of New York, is the preparation I have employed in the following manner: Five grains of extractum pancreatis and twenty grains of bicarbonate of soda are dissolved in four ounces of tepid water. This is added to one pint of fresh milk warmed to the temperature of the body, and the mixture is allowed to digest for about one hour at a temperature of 100° F. The milk when ready should have a slightly bitter taste, or, rather, after-taste. It is now raised to the boiling point, strained, and placed on ice, ready for use. In my experiments I found that the casein of the milk was not completely peptonized, nor the fat entirely emulsified, until the digestion had proceeded for two hours or more. But the milk becomes very bitter and disagreeable to the taste after such prolonged digestion, and in practice one hour's digestion seems to give the best results. As will be seen from the cases detailed below this length of time suffices to render the milk easy of assimilation.

CASE I. E. A., a child of nine years of age, is not very strong, but has a fair digestion, as a rule, though with a tendency to constipation. In consequence of a succession of colds the child's strength became much reduced, and at the time of my first visit subacute,

passing into acute, dyspepsia had developed. The symptoms were nausea and vomiting, and epigastric pain on taking food. After trying a very simple diet and various digestives without good effect peptonized milk was given as the sole food. All dyspeptic symptoms ceased at once, and after two days of this diet other articles of food were, one by one, permitted to be eaten, and were well borne. In five days from the beginning of the attack the child's digestion was apparently perfectly restored, though she had not yet recovered her usual strength. There was marked constipation in this case, which was relieved by Seidlitz powders.

CASE II. is that of Miss B., a young woman of twenty-two, far advanced in consumption. Her digestion has always been rather weak. On the 10th of February, 1883, the patient complained of occasional nausea and vomiting, and also of a troublesome diarrhoea. The vomiting was checked for some time by milk and limewater, and the diarrhoea controlled by lead and opium. On February 23d the vomiting grew much worse, pepsine, lactopeptine, ingluvin, etc., were all tried, but to no purpose. At the same time the diarrhoea became almost uncontrollable, there being six or eight loose dejections daily. The stomach rejected all food, even of the simplest nature. Peptonized milk was now given, and was well borne by the stomach for two days, though the taste of the milk was disagreeable to the patient. There was no diarrhoea during these two days, although no astringent medicines were used. As the patient now began to have a strong repugnance to the peptonized milk it was discontinued, and a return to ordinary food was gradually made. During the month following her digestion remained very good, and but little medicine was required for the bowels. On the 21st of March there was again a little vomiting accompanied with quite severe diarrhoea. Peptonized milk was at once ordered, but mutton and chicken broths were also allowed. The diarrhoea was checked with chalk and laudanum. Again the stomach responded to the milk treatment, though I had but little hope that it would. At the present time the patient's digestion remains fairly good in spite of the steady advance of the disease in her lungs.

CASE III. March 1, 1883, I was called to Mrs. C., a lady two months along in her second pregnancy. Her digestion had never been very strong. She was now suffering from almost constant nausea, which for a time was controlled by lactopeptine and ingluvin and a careful regulation of the diet. After a time these remedies failed of effect, and all kinds of food were vomited, though the patient maintained the recumbent position constantly. Previous to the advent of the nausea the patient had been taking six or seven glasses of ordinary milk daily, but now she could not bear even a very small quantity, having a great distaste to it. Peptonized milk was now given to the exclusion of all other forms of nourishment. The vomiting ceased almost immediately, and after a day or two there was no more nausea. Rest in bed was still maintained for three days; the patient was then able to get up and go about with no further dyspeptic symptoms. After five days of peptonized milk diet rare beefsteak was given once daily, and in a few days more the peptonized milk was given up entirely, the patient longing for plain milk and ordinary food. There has been no return of the dyspepsia, but the patient is, of course, very careful in her diet. She

¹ Read before the El Paso County Medical Society, April 9, 1883.

considers her digestion to be better now than it has been for years.

In this case, as in the first, there was marked constipation. Pills of extract of *nux vomica*, *hyoscyamus*, and compound extract of *colocynth* were employed to combat it.

As bearing upon the question of the rapidity of absorption of peptonized milk it may be well to note one incident in the history of this case. On the first day of the milk treatment the patient had left her bed for some reason twenty minutes after taking a full glass of the prepared milk. The movement was followed by the vomiting of about a tablespoonful of greenish fluid. There was not a trace in it of the milk so recently swallowed. According to the physiologists two hours is the time taken by ordinary milk in digestion.

There are a few points to which I shall refer briefly in closing.

First. It is essential that the physician in charge, or at least some one more intelligent than the ordinary servant, should superintend the first preparation of the milk. In the second case given above the milk was made too bitter on the first day, hence the patient took a distaste to it which she could not afterwards overcome. In the course of the hour taken by its digestion the temperature of the milk may be allowed to rise as high as 115° F. or fall as low as 98° F., but only for a few minutes at a time. It is best to keep it as near to 100° F. as possible.

Second. In the process I have described the pancreatic extract is not the only factor in transforming the casein into albuminose. According to the experiments of T. Schmidt a solution of bicarbonate of soda added to cow's milk diminishes the amount of casein and increases that of the hemialbuminose. Again, the same observer proves that the process of boiling transforms a considerable amount of the casein into hemialbuminose, and thus brings the composition of cow's milk nearer to that of woman's milk. We thus have three forces all tending to make the milk more assimilable for the stomach.

Third. Though I have dwelt especially upon the utility of peptonized milk in acute dyspepsia, I am convinced that it would also be of service in many cases of chronic dyspepsia. The patient in Case III. had been a sufferer from greater or less dyspepsia for years. Less than one week of peptonized milk diet not only relieved all her acute symptoms, but also improved her digestion to such an extent that she can now eat and assimilate all kinds of food.

Fourth. From its readiness of absorption peptonized milk ought to be well fitted for rectal injection. When used for this purpose its digestion might with advantage be carried much further than when prepared for the stomach.

Fifth. The three cases I have reported are all in which I have had an opportunity to try peptonized milk as an easily assimilated food. Though few in number the uniform success of the treatment has led me to publish them with the hope that further trial by other observers may verify the results I obtained.

— An English farmer, aged fifty-nine, of previous good health, was stung in the eyelid by a bee. Signs of collapse appeared at once, and the man died in one half hour after the sting was received.

RECENT PROGRESS IN GYNÆCOLOGY.

BY F. H. DAVENPORT, M. D.

COMPLICATED CASE OF VESICO-VAGINAL FISTULA.

DR. L. A. NEUGEBAUER¹ reports the following interesting case: The patient, a domestic twenty-six years old, was admitted to the Heiligen Geist Hospital in Warschau, for incontinence of urine. Two years before she had borne a child after a labor which had lasted three days after the escape of the liquor amnii, and finally was terminated with forceps. Immediately afterwards urine began to come through the vagina. Six months later she was operated on without success, and a second physician had no better result after trying three operations. The patient therefore entered the hospital.

Dr. Neugebauer found a cicatricial closure of the vagina, one inch above the hymen, which was plainly operative, but not complete, there being two pin-hole openings, one at each corner of the cicatrix. On examining the bladder with the finger, he found the fistula so large, and the edges so rigid, that the only thing that remained was to complete the closure of the vagina. The left hand fistula was successfully closed at the first attempt, and the right hand one at the second, and the patient was discharged well.

Nearly three years later she presented herself again, and reported that for some time she had had pain in the bladder and vagina, and that lately urine had come through the vagina. Examination revealed a small fistula in the middle of the cicatrix. Pressure with the finger showed the presence of a hard body above the septum, and a probe passed through the opening made it clear that it was a calculus. It filled the vaginal canal, and apparently part of the calibre of the bladder, and was immovable. The only feasible course was to open the vagina, extract the stone, and close it again. The septum was divided with the knife, but the opening not being large enough it was still further stretched by compressed sponge. After several days' dilatation, it was possible to seize it with polyp forceps, and with great difficulty to extract it. It measured two and one half inches in length by two in breadth, and two in thickness, and weighed when dried two ounces. It consisted principally of phosphate of lime. Three operations finally reclosed the vagina, and the patient returned home well.

AGE OF MENSTRUATION IN FINLAND.

Dr. G. Heinrichius² has collected from the journals of the Obstetrical Clinic at Helsingfors the following statistics with regard to the first appearance of menstruation in 3500 women, all of the lower classes:—

In 9 women the menses occurred in the 11th year.				
33	"	"	"	12th "
135	"	"	"	13th "
440	"	"	"	14th "
765	"	"	"	15th "
846	"	"	"	16th "
560	"	"	"	17th "
347	"	"	"	18th "
198	"	"	"	19th "
102	"	"	"	20th "
41	"	"	"	21st "
12	"	"	"	22d "
7	"	"	"	23d "
4	"	"	"	25th "
1	"	"	"	26th "
3500				

¹ Centralblatt für Gyn., March 3, 1883.

² Centralblatt für Gyn., No. 5, 1883.

The average age was $15.82 =$ fifteen years, nine months, and twenty-five days. The population of Finland consists of six sevenths Finns and one seventh Swedes. No difference in regard to the time of the appearance of menstruation between the two races could be discovered.

DRAINAGE OF THE UTERUS (NON-PURPERAL).

Dr. E. Schwarz¹ in considering this subject draws an analogy between suppurating cavities which heal when good drainage is secured, and the hollow organs, such as bladder and uterus, which are the subject of catarrh. The catarrhal affections disappear the more quickly the more freely the secretions can escape. This free drainage has been practically secured in cases of cystitis by making artificial vesico-vaginal fistulæ, or by the long continued use of self-retaining catheters.

In the case of the uterus the drainage is naturally freer than that of the bladder, but through swelling of the mucous membrane, or constriction from flexion, the free exit of the secretions may be hindered. A large quantity cannot collect, as it will be expelled by the contractions of the uterus, but in case of catarrh there is always, according to Schwarz, a small quantity of muco-purulent material, which tends to thicken and become foul. To combat this difficulty the canal has been enlarged, either with the knife or by forcible dilatation, internal treatment has been used to change the chronic into an acute catarrh, and of late years the uterus has been irrigated with disinfecting solutions.

The author describes a method of constant drainage which he has employed with good success. His first attempts were with rubber tubes, but these were either forced out of the uterus or became plugged with mucus, and became a source of irritation. He therefore substituted braids of fine spun-glass, but at first used them too large, so that they caused uterine colic, and irritated the interior of the uterus. By unbraiding and making a small smooth bundle of loose glass fibres, these difficulties were overcome. He used them with the best effect in cases of subinvolution of the uterus. The secretion became somewhat more free, but thinner, and often in a few weeks entirely disappeared, and the uterus became smaller. Also in some cases of mechanical dysmenorrhœa accompanying ante-flexion was the result very satisfactory. He has also used the same method in cases of amenorrhœa. Six cases are briefly given, some where menstruation had never occurred, others where the amenorrhœa was acquired, in all of which the use of the glass drainage was followed by marked improvement.

Schwarz regards this method of treatment as both simple and harmless. Slight uterine colic occurs occasionally, inflammatory reaction never. The glass threads are six to seven centimetres long, tied in a knot at the uterine end, or bent over in the form of a hook, and fastened by a thread. A thread is fastened to the vaginal end so that it can be withdrawn. They are covered with iodoform and introduced with the sound. In cases of endometritis and dysmenorrhœa, they may remain for months, being renewed from time to time as they become foul. In amenorrhœa it is often only necessary to place them for a few days before the expected menstruation. (The reporter fails to see that the value of this method of treatment depends upon the *drainage* of the uterus. The spun-glass merely acts as any slight irritant to the interior of the uterus, and stimulates it,

in one case to involution, in the other to the performance of its natural function, menstruation. The same result is obtained by intra-uterine stema, especially galvanic stem pessaries.)

ÆTIOLOGY AND PROPHYLAXIS OF DISEASES OF THE FEMALE GENITAL ORGANS.

Dr. B. S. Schultze² attributes the apparent greater frequency of such affections in the last ten years to the fact that our growing knowledge leads us to recognize their existence. One of the most frequent and troublesome affections is catarrh of the uterus, with its consequences, pelvic-peritonitis, and cellulitis, retro-flexion and oöphoritis. Its principal cause, aside from masturbation and gonorrhœa, is the entrance of atmospheric air into the genital tract, which occurs even in virgins, the menstrual blood being the channel for the entrance of the infectious material. Therefore the author advises the operative closure of the perinæum when that is torn, and, in the case of multiparæ, the placing at the vulva during menstruation tampons of salicylated cotton to hinder the entrance of air, and the use of warm water injections even during menstruation to remove clots. He warns against vaginal injections in childbed, as favoring the admission of air.

ETIOLOGY OF ENDOMETRITIS FUNGOSA, ESPECIALLY THE CHRONIC HYPERPLASTIC ENDOMETRITIS OF OLSHAUSEN.

Dr. Breuncke³ states that his intention is not so much to add to the pathological and histological knowledge of this affection as to throw some light upon the origin of this form of uterine disease. For a long time all forms of fungous growths associated with metrorrhagia, and sometimes with purulent discharge, were grouped together under the one name, endometritis fungosa. Later Olshausen separated the various forms somewhat, and Bischoff divided them into four anatomically different affections: (1) that form consisting of oedematous normal tissue, and granulation tissue rich in vessels; (2) the decidua form; (3) the diffuse adenoma; and (4) the diffuse sarcoma. Bischoff's third and fourth forms are evidently nothing but the chronic hyperplastic endometritis of Olshausen, divided into these two categories only because in the one case the uterine glands prevail, in the other the intercellular substance, but clinically the same. So Ruge distinguishes a glandular and an interstitial form, and a mixed form between the two. The author accepts the distinction, but claims that it does not depend upon any essential difference in the disease itself, but upon the age of the patient. The older the patient, the more does the glandular form prevail, while with younger persons the intercellular form is most marked. To illustrate this view, and as a groundwork for conclusions as to the ætiology, Breuncke gives the history of six cases. The first and third cases, occurring in women fifty and fifty-one years old, were markedly of the glandular form; the second and fifth, aged thirty-one and forty-three, of the interstitial type. The mixed form occurred in cases four and six, in patients forty-eight and twenty-six years old.

As regards the ætiology, the author first notices as common to all the cases that before the profuse hæmorrhages characteristic of the disease, there were irregularities in the menstruation. From this fact

¹ Centralblatt für Gyn., No. 13, 1883.

² Wiener Med. Blätter, No. 52, 1882.

³ Archiv für Gynäkologie, Band xx., Heft 3.

Beunecke draws the conclusion that the first factor in the case is functional disturbance on the part of the ovaries, characterized by a retardation of ovulation. As a result of such retarded or difficult ovulation, we have congestion of the uterine mucous membrane, not sufficient, however, to cause rupture of the blood-vessels. Such congestion, unrelieved by hæmorrhage, leads to hyperplasia of all the elements constituting the uterine mucous membrane. When the repeated congestions finally lead to rupture of the blood-vessels, we have a mucous membrane which would favor profuse and long-continued hæmorrhage.

This condition of impaired function of the ovary occurs naturally at the climacterium; hence most of these patients are at or past the menopause. It is known that Graafian follicles may ripen after the cessation of menstruation, and it is fair to suppose that the gradual thickening of the albuginea preventing the most of such ripening follicles from bursting the resulting congestion may be only now and then relieved in the way described. A similar effect is produced in younger persons by any weakening influence affecting the general health, or the sexual organs in particular.

As regards prognosis and treatment, the following may be said: The curette must be the chief method of treatment. After this, to restore the lost energy to ovulation, general tonic treatment must be adopted, and in proportion as this is successful will relapses be infrequent. This applies to those cases where the anomalies of menstruation are due to general debility. When, however, physiological or pathological changes of structure in the ovaries are present, the prognosis must be more guarded. In these cases, either all stimulus on the part of the ovary must be prevented or the results of this stimulus, the hyperæmia of the mucous membrane, be neutralized. For this latter purpose the constant use of glycerine tampons is of great service. The author condemns the use of caustics, as it is his opinion that neither is this change in the mucous membrane of a malignant character nor does it tend to become malignant. In accordance with his theory, if a case should threaten to terminate fatally, he would remove the ovaries rather than the uterus.

The author finally says that he by no means considers every case of fungoid growths accompanied by menorrhagia or metrorrhagia as of ovarian origin. They may occur as a result of various local uterine troubles, as chronic catarrh, marked retroflexion, stenosis of the os internum, and small fibroids. As characteristic of the ovarian form are the irregular menopauses which precede the hæmorrhages, the tendency to recurrence, and the greater quantity of fungoid masses brought away by the curette.

The type of fungoid degeneration connected with abortion, the author thinks, is characterized by remains of the decidua vera, and the observations of Küstner and Ruge confirm this view. At the end of the article is a table which shows the anomalies of menstruation before and in consequence of the three following forms of endometritis: (1) endometritis hyperplastica ovarialis; (2) endometritis fungosa or hyperplastica uterina; and (3) endometritis decidualis.

DUCTS OF GAERTNER IN THE FEMALE.

J. Kocks, of Bonn,¹ thinks he has found the remains of the excretory ducts of the Wolffian bodies, which in

the pig and some ruminants persist as the ducts of Gaertner. He has been able to demonstrate two tubules which open near the orifice of the urethra, and run parallel with its course for from five millimetres to two centimetres in length. A sound one millimetre thick easily penetrates. He does not think it possible that they are the openings of glands, as at their end he could, neither with the naked eye nor with the microscope, determine the presence of gland tissue. He concludes that they are the Wolffian ducts, which are the homologue of the ductus ejaculatorius in the male. These open, together with the orifices of the prostate and the utriculus vasculinus, into the urogenital canal, at a point which corresponds to the vestibulum vaginæ in the female. Hence he concludes that the ducts of the Wolffian bodies should open outside of the hymen, and reasoning from the position of the ducts of Gaertner, as found in some lower animals, close to the urethra. The little papillæ on which the openings are often found he compares to the little elevations of the caput gallilaginis where in the male the seminal ducts usually open.

Skene, in the *American Journal of Obstetrics*, for April, 1880, has apparently described the same structures, and calls them glands. He says: "The upper ends of the tubules terminate in a number of divisions which branch off into the muscular walls of the urethra. By injecting the tubule with mercury, and then laying it open, the openings of the branches can be easily seen." Skene says they may be the seat of an inflammation which will give rise to most annoying symptoms, and yield with difficulty to treatment.

TREATMENT OF CARCINOMA OF THE CERVIX.

Dr. Karl Pawlik² has in this monograph thoroughly studied those cases of carcinoma of the cervix which have been operated on in the first gynæcological clinic at Vienna by the galvano-caustic wire. As regards this method of operating the author by no means advocates it as the best. On the contrary he thinks the knife and scissors an equally good method. He has, however, found the results to be so satisfactory with this method that he publishes these statistics with the hope that the publication of large numbers of cases operated on by other methods may lead to a comparison of the *ultimate results*, and some more definite idea of the relative value of the different methods of operating. His main reason for preferring the knife to the galvano-caustic wire is the complex character and expense of the instrument which make it practically useless outside of large institutions. Hæmorrhage, he claims, can be as perfectly controlled by one method as the other. When the disease is high up in the cervix the knife can reach it better, and the author justly says it would be very short-sighted in so grave a disease as carcinoma to depend exclusively on one or the other method. He lays considerable stress upon the value of the slough, and would have cauterization follow the operation with the knife.

The cases cited show that the simple amputation of the cervical disease is followed by better results than the extirpation of the uterus. As it seems probable that in many cases the disease if left to itself spreads into the surrounding cellular tissue rather than upwards into the body of the uterus the extirpation of the whole organ as a prophylactic measure is unnecessary. In deciding which operation is best there is

¹ Archiv für Gyn., Band xx., Heft 3.

² Wiener Klinik, December, 1882.

one point upon which the author justly lays weight, namely, that it does not always follow that because we find thickening in the neighborhood of the uterus and enlarged glands they are necessarily the result of infection. They may be simply the result of irritation, and post-mortem examinations have demonstrated this.

The following are the results of the 136 cases which the writer has collected:—

Ten cases died in the hospital; one almost four months after the operation from recurrence of the disease; one case twenty-five days after the operation from marasmus; eight immediately after the operation; three of anæmia; and five of peritonitis.

Twenty-two cases could not be found; of two, however, it was known that they were in good health two years after the operation.

Sixteen cases left the hospital not cured.

Thirty-one cases died outside the hospital; sixteen of these had in all probability a recurrence of the disease, one after three years; one had a return near the uterus two years after the operation, the cicatrix remaining unaffected; three died of tuberculosis; for the rest the cause of death was unknown.

Twenty-two cases had a recurrence of the affection, but it was not possible to discover when they died. Among them was one who remained in good health for six years, and one for nineteen months. Two had carcinoma outside the uterus, the cicatrix remaining unaffected.

Two died in childbed, without recurrence, one seven and one half years, and the other one year after the operation.

Thirty-three cases were in good health:—

1,	19½ years after the operation.
2,	12 years after the operation.
3,	8 years after the operation.
3,	7 years after the operation.
3,	5 years after the operation.
2,	4 years after the operation.
5,	3 years after the operation.
7,	2 years after the operation.
7,	1 year after the operation.

The author then gives a description of the method of operating and some of the complications. The peritoneal cavity was opened thirty-nine times in the posterior cul-de-sac, and once both in front and behind. Four of these died, two of anæmia, and two of peritonitis.

Hæmorrhage occurred during or immediately after the operation six times; checked five times by iron cotton, and once by the actual cautery. In thirteen cases secondary hæmorrhage occurred; in three vesico-vaginal fistulæ, one of which was due to a rapid recurrence of the growth. In two cases only did parametritis follow.

FIBROMATA AND MYOMATA OF THE VAGINA.

Prof. Ludwig Kleinwächter¹ has collected in this article all the cases of tumors of this character which he could find in the literature. They number fifty, and to these he has added three which he has himself observed. Among the conclusions which he draws from the consideration of these cases the more important are the following: Nothing is known as to their ætiology. In contrast to those of the uterus they may occur in the vagina congenitally, and in earliest childhood, but they are most frequent in the period of sexual activity. The fibromata are the most common,

the myomata the least so, and the mixed forms stand between the two as to frequency. Without exception they occur singly in the vagina. They start from the submucous connective tissue or the muscular layer of the vagina, or the layer of connective tissue between vagina and rectum. Complications with similar growths in other portions of the genital tract are seldom, only three times in the cases cited.

Menstruation seems to be very little influenced, and hæmorrhages are infrequent. Conception occurs in a fair proportion of the cases. It is not clear that pregnancy has any influence on these growths; they may, however, form marked hindrances at the time of labor.

CARCINOMA OF BOTH OVARIES. DOUBLE OVARIOTOMY. RESECTION OF INTESTINE AND BLADDER. RECOVERY.

Dr. Moritz Schustler² reports the following interesting case from Billroth's clinic:—

A married woman who had had six children and one miscarriage had suffered from the following symptoms for four years: intense pain in the hypogastrium at intervals, gradually growing worse, accompanied by fever and tenderness; later shortness of breath and palpitation of the heart, frequent micturition and constipation. A tumor was first noticed five months before the operation, in the left side, the size of an apple, which grew rapidly, so that at the time of the operation it reached almost to the false ribs. Loosely connected with it was a second tumor to the right, and not so large as the first. There was only slight mobility, the surfaces were nodulated, there was no fluctuation. The uterus seemed pushed to the left side and behind. The operation was done without spray, but under strict antiseptic precautions. On reaching the tumor, and attempting to lift it out of the abdomen, it was found to be closely adherent to the upper part of the posterior wall of the bladder. As the tumor seemed to be malignant Professor Billroth decided to excise the adherent portion of the bladder, and a piece three centimetres long and two centimetres broad was removed. The wound was closed by six fine silk sutures. It was then found that the posterior surface of the tumor was so firmly adherent to a part of the small intestine that it could not be dissected off. A piece twelve centimetres long was therefore cut off, and the two ends of the severed intestine joined by fourteen sutures, five internal at the insertion of the mesentery, and nine for the rest of the circumference. The rest of the operation presented no especial difficulties. The convalescence was undisturbed by any complication. Flatus passed on the second day, and on the sixteenth there was an operation of the bowels following an enema. The catheter was used for the first few days only. On the twenty-fourth day the patient left the clinic well. According to later accounts the woman is in perfect health, and fifteen months after the operation there has been no sign of a recurrence. This is said to be the second case of resection of the intestine on record, the first having been performed by Madelung, and described in the *Berliner klinische Wochenschrift*, No. 6, 1881.

MANGANESE IN THE TREATMENT OF AMENORRHEA.

Drs. Sidney Ringer and William Murrell³ call attention to the value of this drug in the treatment of

¹ Zeitschrift für Heilkunde, Band iii., Heft 5 and 6, 1882.

² Wien. Med. Woch., No. 2, 1883.

³ Lancet, January 6, 1883.

certain forms of amenorrhœa. They have tried it for thirteen months, and have notes of sixty-nine cases, both hospital and private. They have used the drug in two forms, the pharmacopœial solution of the permanganate of potash, and the same salt made into pills, principally the latter. The best results have been obtained in young women from eighteen to twenty-five, who, from some trivial cause, such as catching cold or getting wet, have missed a period or two. In some cases the menses were brought on after the amenorrhœa had lasted over a year. Good results, too, were obtained in girls who, from a change of climate, as going from the country to the city, had stopped menstruating. When the menstruation had never appeared the drug was not so certain in its action, but even here it often had a good effect. When the flow was scanty it often markedly increased it. In the case of older women, who, as a result of numerous pregnancies and prolonged nursing, were irregular, the drug acted very well. It had no effect in the amenorrhœa of advanced phthisis, and probably would not produce abortion, but the existence of pregnancy should not be overlooked. If given in the pill form it is best to begin with a grain three times a day, and gradually increase to two grains four times a day. The larger doses have the best results. Usually the effect will be produced in three or four days, but there is no objection to continuing its use much longer. The only unpleasant effect was, in a few cases, a feeling of heartburn or indigestion. It will, of course, have a more decided effect if given for a few days before the sickness is expected.

LACERATION OF THE CERVIX UTERI WITH ESPECIAL REFERENCE TO THE EFFECT ON STERILITY AND LABOR.

Dr. B. F. Baer¹ read a paper on this subject before the Obstetrical Society of Philadelphia. He refers to a paper by Dr. Murphy in the *American Journal of Obstetrics* for January, 1883, in which that author comes to the conclusion that "repair of lacerations of the cervix is usually followed by sterility." Dr. Baer thinks that as far as this statement goes it is true, but that as in the majority of cases of this affection sterility has preceded the repair of the cervix, the more correct conclusion would be that the operation failed to cure it. He gives the result of twenty-seven cases studied with reference to this point. Of this number six were either widows or had reached the menopause, and thirteen of the others had been sterile from five to thirteen years. These last he thinks should not be included, as sterility of so long standing is associated with structural changes, such as connective tissue hyperplasia, which the operation fails to modify. Of the eight remaining cases in which impregnation had occurred within five years previous to the restoration of the cervix four had, to the knowledge of the writer, been safely delivered at full term since the operation. There was no re-laceration in these cases.

In the discussion Dr. A. H. Smith said that a large proportion of the cases operated on by him have become pregnant after operation. He also spoke of the existence of obstinate nausea in pregnancies after operation upon long-standing cases, accompanied with an enlarged and hardened condition of the cervix. He disagreed with the writer as to the effect of the operation on a hyperplastic uterus. He had seen marked

reduction in size follow the repair of the lesion when all other means had failed.

Dr. Goodell said he thought the operation had an influence in causing sterility. Of 169 cases in which he had operated he has known only seven to become pregnant, though he had lost sight of so many that the real proportion could not be known.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

SERVICE OF DR. W. C. B. FIFIELD, DR. E. H. BRADFORD SUPPLYING.

REPORTED BY EDWARD J. CUTTER, M. D., LATE HOUSE SURGEON.

COMPOUND FRACTURE OF RADIUS AND ULNA; COMPOUND FRACTURE OF CORONOID PROCESS OF ULNA AND TROCHLEA; SIMPLE FRACTURE OF HUMERUS; SIMPLE FRACTURE OF FEMUR.

JOSEPH G., a printer, twenty-four years old, single, was brought to the hospital on the evening of October 17th. The story was that he had been drinking, and had fallen from the Herald Building to the ground, a distance of about forty feet. He was in a state of shock, not excessive; had evidently been drinking freely.

Dr. Bradford, in charge of the service, was sent for, and an examination under ether showed the following injuries: A fracture of the ulna in the lower fourth, with considerable lateral displacement, communicating with the air by an opening large enough to admit the tip of the little finger. A fracture of the radius at the junction of the middle and upper thirds also communicated with the air. There was more or less comminution, great bruising of the soft parts, swelling and discoloration. There was great swelling around the elbow, with dislocation of the fore-arm backward. There was made out a simple fracture of the humerus at the junction of the upper and middle thirds, transverse, and apparently without comminution. It was noticed at the time that after reducing the dislocated elbow any movement of the fore-arm in extension immediately redislocated it. The opening over the radial fracture was enlarged for the purpose of exploration; the finger passed in found very extensive crushing and laceration, and also a fracture of the coronoid process of the ulna, rupture of the capsule, and "chipping" of the trochlea. Examination of the thigh showed fracture of the femur at the junction of the upper and middle thirds, with considerable displacement.

The question of amputation which came up was settled in the negative for the time being. There was pulsation in the radial artery, and the condition of the patient was such that it seemed likely that he would not survive an amputation at the shoulder. The exploratory incision was enlarged, a counter-incision made over the back of the elbow, clots and blood turned out, the arm washed out with a solution of carbolic acid (one to eighty), drainage tubes put in, with a Lister gauze dressing and an internal angular splint.

The fracture of the femur was treated by Buck's method, using a long T splint instead of sand bags, with weight and pulley, and the foot of the bed raised; coaptation splints applied over the thigh. Heaters to body.

¹ Medical News, February 24, 1883.

R Tr. opii 1
 Brandy 25 M.
 Repeat pro re nata.

October 28th. Reaction well established. Seen by Dr. W. H. Thorndike with Dr. Bradford. An expectant method of treatment determined on. Great difficulty in preventing dislocation of elbow; a tin internal angular with gutta-percha coaptation splints above and below elbow, over which is the Lister gauze dressing covered with Mackintosh.

October 29th. Considerable febrile action; not much pain; tongue coated; thigh in good position; backward displacement of elbow persists in recurring as there is no point, owing to the bruising, where pressure can be safely applied. The Lister dressing given up, and apparatus arranged for constant irrigation with a solution of carbolic acid (one to eighty).

R Brandy 30
 Every four hours.
 R Quinine sulph. 30
 Three times a day.

The patient was observed to fail very fast during the afternoon. He was very pale; skin cool and moist; pulse weak and rapid; breathing quick and gasping; consciousness complete; no pain; no hæmorrhage.

R Ammon. carb. 30
 Brandy 15.00
 Every hour.

October 30th, two A. M. Dead.

The point about the case worthy of record is the fracture of the coronoid process without a general smash of the joint. The method of fracture of the coronoid process is a matter of dispute, as in fracture of the patella there are two causes predicated, direct violence and muscular strain. Hamilton regards it as a result of direct violence associated with other fractures about the joint. Malgaigne speaks of it in connection with "luxations" of the ulna. In general works on surgery it is barely mentioned. Dr. Stimson, in his late work on fractures, has collected and reviewed much of the literature on it. On page 428 he refers to the various specimens preserved in museums. It is peculiar that there are so few, and would seem to show that either the accident is very rare or repair very perfect.

It is difficult to see how the accident could happen, in a part so well protected, as a result of direct violence except with a general smash or other fracture of the joint or in connection with a luxation. In the latter case, too, the fact of the brachialis anticus being contracted or not would seem to be an important element, so here muscular strain would have to be considered a cause. Stimson cites the experiments of Lotzbeck, who fixed the elbow semiflexed, and then by striking down on the palm of the hand fractured or tore off the process in five times out of seven. In the case reported it would seem, from the fractures of the fore-arm, the position of the openings, and the comminution, that the man fell on his hand. The fore-arm was pushed with great violence by the lower end of the humerus. The force was so great it seems that the humerus could not resist it, and also broke. If we imagine the arm so far extended as to put the brachialis anticus on the stretch, and yet flexed a little so that the line of force was oblique to the humerus, we have a condition to produce the fracture as found.

The diagnosis here was made out from actually touching the broken bone, but before doing that it was suggested at least by the strong tendency of the dis-

location to recur; and this is put forth by all the writers as a diagnostic point. In a few cases surgeons are reported as having made out the separated fragment in the bend of the elbow.

The strong attachments of the capsule behind, and the broad insertion of the brachialis anticus in front, could prevent any very marked separation, and in this way Stimson accounts for the great chance of perfect repair.

The treatment in an ordinary case is plainly indicated; hold the arm semiflexed; keep the elbow in position; and give it rest. In our accident the fracture of the coronoid proved a most baffling complication at first, as noted; the after-treatment would have in all probability been indicated by his other and graver injuries.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, M. D., SECRETARY.

MARCH 19, 1883. DR. C. H. WILLIAMS presided.
 DR. GEORGE STEDMAN read

A CASE OF LAUDANUM POISONING IN AN INFANT ONE DAY OLD. RECOVERY.¹

DR. INCHES asked as to the frequency of convulsions in opium poisoning. He thought it a very unusual symptom, one not laid down in the books, and certainly outside ordinary experience.

DR. STEDMAN could not say how often such symptoms occurred. But in this case, attended with so many convulsions, the evidence was positive that the overdose of laudanum had been given, and it was the only factor at work.

FATAL CASES OF ABORTION.

DR. STEDMAN read a report of Two Cases of Abortion, One presenting Unusual Difficulties in the Post Mortem, the Other in the Ante Mortem, Diagnosis of the Cause of Death.²

DR. GANNETT asked if no pathological or forensic diagnosis was made in the first case. Was not the air in the heart a probable, or at least a possible, cause of death?

DR. STEDMAN replied that no positive diagnosis had been made, and it was the difficulty in diagnosis which gave exceptional interest to the case. It was possible that air had been introduced into the uterine veins while the abortion was performed, and had made its way to the heart without showing itself elsewhere. But he would expect to find evidence of it also in the lungs.

DR. GANNETT thought this very important as a matter of diagnosis. When air is introduced into the veins, we do not always find air embolism of the lungs. Death is caused by the air in the heart paralyzing that organ. The air in the lungs is a far less important factor. A large portion of the lung may be cut off in this way without fatal consequences.

The manner of the death, its suddenness, the absence of other signs, the presence of a certain amount of air in the heart even though not found elsewhere, taken in

¹ See page 52 of this number of the JOURNAL.

² See page 50 of this number of the JOURNAL.

connection with the fact that decomposition had not set in, afford at least presumptive evidence that air was the cause of death.

DR. STEDMAN replied that this view would be reasonable had the death been instantaneous. But the victim lived long enough for the lungs to become cedematous. Such being the case, it was very unlikely that no trace of air should appear somewhere in the lungs as well as in the heart.

DR. WHITNEY said that the first case was interesting on account of the difficulty of establishing a pathological cause of death. The immediate cause of death was suffocation from venous congestion. But we can scarcely believe that this in a healthy girl was the primary condition. It is clearly secondary to some preëxisting cause. At first it seemed as if there might be cerebral disease, and for this reason at the examination the head was opened first. Air might perhaps have been sucked in from opening the large veins of the neck. The air showed itself on the opening of the right ventricle, and the amount of it was very small. It is possible, too, that so small an amount might have entered in the act of opening the heart. No trace of air was found in the lung tissue after very careful examination, and since the patient lived fifteen or twenty minutes, he should have no doubt that it would show itself there in that space of time. There was certainly not air enough to cause any dilatation of the uterine or other veins. Why, then, did she die? For his part he could not say. Something, a finer point than usual, may have been overlooked. Air embolism is the probable cause, but it is not proven.

DR. GANNETT referred to one other point in connection with air embolism, due to air introduced through the veins of the neck or uterus. There has been shown in quite a number of cases a tendency of the air to collect in the right side of the heart and not to pass on to the lungs. The air remains here to be churned over and over again. It is doubtful if the death ought generally to be ascribed to the air embolism of the lungs, for the amount of lung tissue disabled is very small. Yet with solid emboli a large portion may be disabled without any rapidly fatal result. The paralysis of the heart is the real cause of death in these cases.

DR. F. C. SHATTUCK suggested that if the heart's action was already embarrassed by the presence of air, the disability would be materially increased by the cutting off of a relatively smaller aerated space of the lungs, and the fatal result thus hastened.

DR. WHITNEY remarked further, if we accept air embolism as the cause of death, the quantity required was much smaller than he had supposed necessary. There was nothing outside the heart to suggest it. Possibly, too, so small an amount might have come from beginning decomposition of the blood, even though the destructive process had not advanced far enough to be evident.

Dr. Whitney also exhibited photographs of the specimens in this case.

DR. M. H. RICHARDSON also reported several cases of abortion to which he had been called, and remarked that these cases suggested two questions: first, can a woman procure an abortion by the use of a catheter on herself, as was claimed in one case? second, what is the physician's duty, when called to such a case? He had little doubt that the woman operated on herself in the one case, although he thought it must be rare. As

regards the second point, he maintained that whenever called to a case of abortion, a consultation was necessary for self-protection.

DR. C. M. GREEN said it was not difficult for a woman to introduce a catheter into her uterus. The pregnant uterus sinks down nearer the vaginal entrance, and is easily accessible. He had seen several cases in which the patient undoubtedly operated on herself, and he thought it quite frequent.

DR. BUSH and DR. GEORGE STEDMAN reported each a case of

NASAL DIPHTHERIA.

DR. BUSH's case was as follows:—

F. B., of German parentage, aged two years, whose only previous diseases had been feverish exacerbations during the eruption of the teeth, was taken sick the latter part of November, 1882, with a nasal discharge, watery in character, accompanied with elevation of both pulse and temperature.

He was seen by a physician, who diagnosticated "worm fever," and said the child had taken cold.

This train of symptoms continued for two weeks, when the discharge becoming purulent and very offensive, an apothecary was consulted, who said the child was "diseased," and that it had better die.

I saw the patient on December 25th, a month after the commencement of the trouble. There was an offensive discharge of pus, mixed with blood, from the nose. The edges of the nostrils were excoriated, the ulcerations extending to the lips. The nasal mucous membrane was covered posteriorly as far as could be seen, with a grayish deposit, along the edge of which was a distinct red line.

An examination of the pharynx showed the tonsils red and swollen, and though no deposit was seen upon them, the diphtheritic pellicle was found upon the membrane in the naso-pharyngeal space.

There was increased temperature and rapid pulse. The act of breathing was difficult, and was performed with the mouth open. There was diarrhœa, watery in character, and very offensive.

The child would sleep only for a few minutes at a time, waking with a start. There was jactitation, and the head was being thrown constantly from side to side. There were frequent attacks of dyspnœa.

It was with difficulty that the child could be made to take milk or beef tea, though brandy and water was swallowed with avidity. The tincture of the chloride of iron in a mixture of glycerine and water was given as a tonic, and the same was used "topically." The nostrils were washed out with a weak solution of carbolic acid, and iodoform was used for insufflation. An ointment composed of the red oxide of mercury and vaseline was applied to the external parts of the nose, and to the labial excoriations.

The high temperature of the body was reduced by the use of saleratus baths. Stimulants were crowded. The symptoms of impending suffocation which came on at irregular intervals were relieved by the inhalation of steam. This treatment was followed up for a week (six weeks from the date of the invasion of the disease); at the end of which time the mucous membrane seemed free from the deposit. The appetite returned, and he slept well, and apparently was doing nicely, the only thing noticed being that there was regurgitation of food, liquids coming out through the nostrils.

Two weeks later, in the middle of January, the parents noticed that the child could not stand, and I found the muscles of the legs flabby and paralyzed.

The child continued to eat and sleep well. I gave the syrup of the iodide of iron, and ordered that the stimulants, which had been discontinued, should be resumed.

By the 1st of February, use of the muscles of the legs had been regained, but it was noticed that there was difficulty in swallowing, there being a peculiar sound in the throat when this process was attempted, though the patient seemed lively.

On February 3d, the muscles of the head and neck lost their power, the little one crying continually unless the head was held in one position, to wit, with the chin resting on the shoulder of its nurse or mother.

On February 5th it died suddenly.

The treatment during the last week consisted only of food and stimulants.

No autopsy was allowed.

DR. STEDMAN'S case was as follows:—

In July, 1881, I was called to see a child, aged two and a half years, which was said to have a bean lodged in its nose.

It was impossible to thoroughly examine the child until it had been etherized, when a thorough examination was made with the aid of specula and probes. I was unable to discover any foreign body. The child was then taken to the Massachusetts General Hospital, where it was again etherized, and the nasal passages were explored by Dr. R. M. Hodges, who, not being able to find the foreign body, passed a Bellocq's canula, armed as if for plugging the posterior nares; a sponge was attached to the string and was drawn up behind the soft palate and out through the anterior nares; as the sponge was brought forward it brought before it quite a large piece of diphtheritic membrane. The same process was gone through with on the other side of the nose, and with the same result. The appearance of the membrane explained the obstructions to the nasal respiration which had been attributed to the probable presence of a bean.

There were no appearances in the throat or anterior nares which might have led us to suspect diphtheria.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDÉ, M. D., RECORDER.

THURSDAY EVENING, June 14th. DR. TYSON, President, in the chair.

KIDNEYS AND HEART FROM A CASE OF CHRONIC BRIGHT'S DISEASE; EXTREME URÆMIC DYSPNOEA; MARKED ŒDEMA; RELIEF TO BOTH BY ACUPUNCTURE; INCIPIENT NEURITIS.

By J. H. MUSSER, M. D.

R. T., aged thirty-five, admitted to University Hospital July 17, 1878. Single; a packer of goods; frequently exposed to draughts while in profuse perspiration; used tobacco to excess; once or twice a year he would spree. At twenty-two he had a chancre(?). No secondary symptoms. Three times he had gonorrhœa. Always healthy prior to present illness; never had rheumatism.

The patient inherited a tendency to phthisis from

both parents, and to rheumatism from his maternal grandmother.

The onset of the present illness was observed two years ago by a sudden night attack of dyspnoea. The dyspnoea continued for nine weeks, worse at night and preventing work in the day-time. Œdema of the feet and frequent micturition accompanied the dyspnoea. He improved, to have a relapse in four weeks of a month's duration, followed again by temporary improvement, and a third relapse. From the latter he never rallied, Œdema, cough, dyspnoea, frequent micturition, and dyspeptic symptoms being constantly present. The cough was dry, and attended by sub-sternal pain. The Œdema was general. When admitted to the hospital, under the care of Professor Pepper, his condition was as above mentioned. During the July, August, and September following the asthmatic attacks continued. In October they were relieved, but the anasarca became more pronounced.

It may not be out of place to say that the dyspnoea was very severe and almost defied treatment. It presented the clinical characters of uræmic asthma, and was relieved only by inhalations of nitrite of amyl or by hypodermatic injections of morphia. The anasarca was very great and not relieved by diuretics, diaphoretics, or cathartics. In October acupuncture was resorted to, with temporary relief to the lower extremities and scrotum;—its good effect lasting five days only, but being so marked as to encourage one in its use. During the following three months the punctures were made about fifteen times, and after each operation about three pints of serum would drain away. The latter part of December erysipelatous inflammation developed about the punctures on the right leg and extended over it. During the progress of the inflammation large bullæ would form, the bursting and continued free discharge of which caused an entire disappearance of the Œdema of both legs. Relief was not only afforded by these operations to the Œdema, but the attacks of asthma notably diminished in frequency and severity. January 8th, two weeks after the inflammation of the right leg developed, sloughing took place. The sloughing was confined to the calf of the leg, was deep, and was attended with free serous discharge from the ulcers. In a few days a low typhoid state set in, he rapidly lost strength, and on the 7th of February died of exhaustion.

When these notes were taken (January 8th) the remaining features of the case were as follows: He was emaciated and anæmic, and his skin was harsh and dry, his countenance anxious. Appetite poor; flatulent dyspepsia marked; the bowels constipated; hæmorrhoids; tympanitic abdomen; slightly enlarged liver; normal spleen.

At the apices of the lungs diminished expansion; flattening, impaired resonance, and increased fremitus at the left; moist crackling and sub-crepitant râles heard throughout the lungs. Apex beat of heart in the sixth interspace one fourth inch inside of nipple line. Veins of right side of neck enlarged. Cardiac impulse moderately strong. At apex a low-pitched systolic murmur; muscular element lessened. At base pulmonary second accentuated. The width of the cardiac area of dullness was increased one half inch to the left and was not changed by full inspiration.

Urine contained albumen; amount varying, at times two thirds, then one third bulk. Hyaline and numerous granular casts.

Ophthalmoscopic examination. Small disks. Myo-

pia. O. D., disk dirty gray, veins tortuous. No marked change in the color of the nerve; outlines misty and it slightly swollen. O. S., disk same but more marked. No hæmorrhage, in either eye. Diagnosed incipient neuritis.

Autopsy five hours after death. No rigor mortis; emaciated; commencing ecchymoses. Great fullness of the venous circulation.

Lungs. Apices bound down by adhesions. Slight right hydrothorax. Base of left lung, ante and post, adherent. At left apex three or four areas of catarrhal pneumonia.

Heart. Weight twenty-one ounces; left ventricle, wall hypertrophied; mitral valve insufficient, admitting almost three fingers; its cusps thickened; one leaflet of the aortic valve slightly diseased; left cavities increased in size. Aorta atheromatous, a large patch especially one half inch from the valves.

Liver enlarged, hard, congested. Kidneys small, congested, capsules adherent; relation of cortical to medullary substance normal.

Microscopical examination of kidney showed decided interstitial nephritis with fatty degeneration of the tubular epithelium. Liver slightly cirrhotic and fatty. Muscular fibres of the heart slightly undergone fatty degeneration.

AORTIC VALVE DISEASE DUE TO THE COMBINED ACTION OF STRAIN AND RHEUMATISM; EXCESSIVE DILATED HYPERTROPHY.

By J. H. MUSSER, M. D.

Neither the habits, the hygienic surroundings, nor the social conditions of Mr. C. K., from whom these specimens were removed, had any relation to the cause of his illness. As a laborer in a rolling mill his occupation might have had some predisposing influence on the localization of the disease, he being exposed to extremes of heat, and obliged to do heavy lifting. The family history did not disclose hereditary disease. Withal in the past twenty years—at this noting he was aged forty-seven—he had had frequent attacks of inflammatory rheumatism, and in 1875, four years previous to this account, he had an unusually severe attack of palpitation and of indigestion, characterized by pain and vomiting. These symptoms increased in frequency and severity, and were often attended by œdema of the legs. The last three years he was unable to work. Within the year he lost in flesh and strength, and had several attacks of pulmonary congestion.

I abstract the condition on admission to the hospital, December, 1879, from notes taken as registered:—

“Slightly emaciated; sallow complexion; anæmic appearance; countenance of suffering; dry skin; cold extremities; ankles œdematous; muscular weakness; tremor on exertion. Marked prominence of lower part of chest and bulging of præcordia; sternum pushed forward, lower half especially, giving pouter-pigeon appearance. Impulse marked in normal cardiac area, and extending two inches to the left; epigastric pulsation; pulsation of veins of neck; apex beat in sixth interspace one inch outside of nipple line. No hepatic pulsation. A line drawn diagonally from the second right costo-sternal articulation to the fourth rib, one inch from right nipple line, and then vertically to the hepatic dullness, represents the right border of cardiac dullness. From the top of the third left rib, one inch from the sternum, a uniformly curved line, ex-

tending to the apex beat, showed the left limit. By joining these lines with horizontal ones the upper and lower borders are defined.

“On auscultation at the aortic orifice a strong systolic murmur, transmitted to the vessels of the neck, and a rough diastolic murmur, transmitted to the base and along the sternum, is noted. At the xiphoid cartilage and at the apex systolic murmurs, differing in pitch, are heard, the latter also at the spine of the left scapula. Pulse small, feeble, compressible; not counted.

“Cough, muco-purulent expectoration are complained of, and the physical signs of bronchial congestion are observed. The appetite is poor; pyrosis and flatulence distressing; bowels constipated. Urine slightly albuminous, no casts.”

Subsequent course. With calomel and soda and a liquid diet at first, followed by digitalis and quinia, the venous stases had disappeared, and the cardiac symptoms ameliorated within a month. After exposure to cold internal venous congestions and œdema had supervened, and in five days, January 20, 1879, he died of pulmonary congestion.

At the autopsy the lungs, liver, spleen, and kidneys were found characteristic of dilatation of the heart, congested, and with increase of connective tissue in the latter three organs. The heart presented very interesting lesions. It was enormously enlarged, weighing thirty-two ounces. The right heart was dilated. The ventricle wall averaged one eighth inch in thickness. The tricuspid orifice was insufficient, and admitted four fingers. The left ventricle wall averaged one half inch in thickness. The mitral valves were slightly thickened, and a few opaque patches were seen. The aortic valves presented a remarkable appearance. Two of them were fused together, and were rigid, projecting in the lumen of the orifice, the other valve also assisting in narrowing the calibre of the opening by rigidly jutting outwards. The lumen was scarcely more than a slit. The coronary arteries were not closed, and were found at the bottom of pouches with calcareous walls. On one side the deposited calcareous matter of which the valves were composed extended under the endocardium to the base of one of the mitral leaflets. Of course the valves were covered by endothelium.

It is of interest to note that the mitral valves comparatively escaped the inflammatory storms while the aortic valves were so markedly affected, contrary to the usual rule. It is suggested that a chronic valvulitis, or at least hyperæmia, might have been started by the strain incident to his occupation, and hence the valves readily invited acute inflammatory processes, the present condition being a secondary degenerative result thereof.

TUMOR OF THE SCIATIC NERVE.

Presented by DR. G. DE SCHWEINITZ.

The following case occurred in the hospital practice of Prof. John Ashhurst, Jr., and it is by his permission that I exhibit the specimen. The patient from whom this tumor was taken is at present an inmate of the University Hospital, and gives the following history:—

On June 16, 1864, owing to a gun-shot wound of the right thigh, he sustained an amputation of that member at the junction of the middle with its lower third. The flaps sloughed, and a few weeks later a reamputation became necessary. This stump healed, but was somewhat conical in shape, and never, from the very beginning, comfortable, being subject to fre-

quent attacks of severe neuralgic pain. Within a year from the date of the amputation a small lump, tender to the touch, was noted, situated posteriorly and a little to the outer side of the stump. The pains now became more severe and more frequent, and were of a "jumping" character, to use the patient's own language. The tumor increased slowly in size until three years ago, when its growth became more rapid, and at the same time the painful nature of the affection more pronounced, until lately the suffering was well nigh unbearable. Finally the growth assumed the size which you see it now presents, and on the 12th of last month Dr. Ashhurst removed it, since which time the patient has been free from all pain except such which naturally accompanied the healing of his wound.

The growth is an irregularly-shaped mass, about as large as a small hen's egg, having an external envelope of adipose tissue, loosely held together by connective tissue. On section the interior is seen to be a somewhat elastic, rather dense-looking growth of whitish color, over which pass a few yellowish fibres, probably strands of the sciatic nerve.

Microscopic examination of the true tumor mass shows an entire absence of any nervous elements, a section exhibiting fat cells, fibrous tissue, some spindle cells, and numerous free nuclei near the enlarged and dilated blood-vessels.

The tumor would, of course, be classed clinically as a neuroma following amputation, while in truth its pathological nature is that of a fibroma. It is interesting that a growth causing so much pain should be without any demonstrable nervous endowment, and surgically it is further worthy of note because its removal was attended with immediate and probably permanent relief to the patient, a desired result which is by no means always obtained by the excision of these growths.

BACILLUS TUBERCULOSIS.

DR. LAURISON, by invitation, made some remarks upon the bacillus tuberculosis, and exhibited a number of specimens. He said that he did not employ nitric acid in preparing his specimens, as it seemed in many cases to bleach out all the bacilli from the tissues, but formic acid in the proportion formic acid one pint, alcohol two pints. It was a curious fact that the bacilli occurred in patches while in other parts apparently equally diseased they were present in small numbers.

Recent Literature.

The Principles and Practice of Medical Jurisprudence.

By the late ALFRED SWAINE TAYLOR, M. D., F. R. S. Third Edition, edited by THOMAS STEVENSON, M. D., F. R. C. P., Lecturer on Medical Jurisprudence at Guy's Hospital. Two Volumes. Philadelphia: Henry C. Lea's Son & Co. 1883.

When a work so well known and of such acknowledged excellence as Taylor's Medical Jurisprudence appears in the book-stores in a new edition it is scarcely necessary that the JOURNAL should do more than to announce the fact as evidence at once of the high esteem in which these volumes are held and of the steadily growing interest which the subject of which they treat is developing. Any elaborate analysis or review of these writings is certainly superfluous, for they long ago took a leading place as a standard English treatise on forensic medicine, and they may well

be indifferent alike to the praise and the disparagement of a new generation of critics. The lamented death of Dr. Taylor has necessitated that the task of revising the text for this latest edition should pass into new hands, and the title-page accordingly bears a second and comparatively unfamiliar name in conjunction with that of the honored professor at Guy's; but Dr. Stevenson, the new editor, was well equipped by his fourteen years of experience as the colleague of Dr. Taylor at Guy's, and by his succession to the chair of his senior as a lecturer on medical jurisprudence, to do full justice to his work, making it, as he says in his preface, a "labor of love." Without doing harmful violence to the original composition he has pruned away much that was superfluous, and thus made room for such additions as the constant progress in medico-legal science rendered necessary; all authors, for example, whom Dr. Taylor quoted with full recognition of their identity have been shorn of their titles and reduced to a uniform rank; "Dr. Bennett Dowler, of New Orleans," is credited in the edition of 1873 with some observations on "post-mortem calorificity;" it is plain "Dowler" who is quoted in the same connection in 1883.

The additions to the text consist largely of illustrative medico-legal cases which have been reported in the last decade; these have taken their permanent place in their appropriate relations, and have materially increased the value of the treatise as a work of reference. Most of these cases are naturally drawn from British sources; we cannot forbear the regret that the editor has utilized so sparingly the medico-legal experience of countries other than his own.

In the section on toxicology considerable new matter is introduced, comprising the full discussion of comparatively new agents like osmium, gelsemium, carbolic acid, chloral, carbon, disulphide, etc., while new chemical processes for the identification of the older poisons are described with sufficient fullness.

Our local pride is gratified by a paragraph in the chapter on coroners' inquests. Dr. Taylor's vigorous denunciation of the English coroner system has been supplemented in the new edition by a brief statement of the methods employed in Scotland, France, and Germany for the investigation of violent deaths. To this is added the following: "A very satisfactory system of holding inquests has been adopted by the State of Massachusetts, and is said to work well. Coroners and juries are wholly dispensed with on the preliminary examination. A competent medical man is duly appointed, in consequence of his fitness, to the post of district medical officer. He inspects the corpse; and if, on such examination, he thinks further examination necessary he is required by the district attorney to make a post-mortem examination in the presence of two witnesses, and makes his report. If it is to the effect that death resulted from violence the case is then investigated by the local public prosecutor. The medical officer is empowered to call in the aid of the chemist. To guard against negligence and fraud, if the examiner report that the death was not caused by violence, and the legal authorities be of a contrary opinion, they cause an inquest to be held in a prescribed manner." The *modus operandi* of the medical examiner law might have been stated differently and more accurately by one more familiar with its practical details; but that the general merits of the system have obtained this cordial trans-Atlantic recognition is a fact worthy of mention.

Medical and Surgical Journal.

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THE MEDICAL DEPARTMENT OF THE BRITISH ARMY IN THE EGYPTIAN EXPEDITION.

THE British journals, professional and non-professional, have lately contained many references to the medical affairs of the recent Egyptian campaign, called forth by the report of a committee appointed by the secretary of state for war to examine into the organization of the Army Hospital Corps, Hospital Management and Nursing in the Field, and the Sea Transport of Sick and Wounded. The committee naturally studied the organization as exemplified by its workings in Egypt, and notwithstanding the express declaration in the report that it was not intended as an investigating committee the testimony which has attracted most attention is that relating to the Egyptian war.

The medical history of our own war is not so far behind as to be forgotten, especially when kept alive as it has been by the memorial volumes of the War Department; and the investigation of the Medical Department of the British army has a very different interest to Americans to-day than it would have had before our own war.

The committee, which is known by the name of its chairman, Lord Morley, examined a large number of witnesses, from his royal highness the Duke of Cambridge, commander-in-chief, down through all grades and branches of the service, and the evidence and report makes a ponderous blue-book of 771 folio pages, which lies before us. None of the complaints seem to be against the surgeons personally, but rather to be directed against the "system." The medical history of the campaign is exceedingly interesting. The testimony shows plainly how differently different individuals look upon the same matters, and how impossible it is for a single individual to see the whole of military affairs that are going on under his own eye.

Perhaps the best means of gaining a fair knowledge of the campaign from a medical stand-point will be to confine our attention chiefly to the hospital at Ismailia, where the difficulties seem to have been greatest, and where the complaints were, perhaps, more numerous than elsewhere, and to the battle-field of Tel el Kebir. These will illustrate two different phases of the service, and show, perhaps, the weakest and strongest points in the medical management.

The campaign was a short and brilliant one. It was an advance from on ship-board into a hostile country, where a base had to be seized, and where, without an opportunity for preparation, the medical

staff had sick waiting for care the day of landing, and wounded the day after. The first troops were landed at Ismailia on August 21st and 22d, and were immediately sent forward. On the 22d the Khedive's palace was handed over to the Medical Department, and was temporarily occupied by a portion of a movable field hospital.

A movable field hospital is a hospital equipped in the lightest manner for moving with the troops. It is not provided with many things absolutely essential in a stationary hospital, for facility of transport is a chief consideration. It has no bedsteads, but is provided with paillasse cases which are filled with straw and used as beds; and in Egypt stretchers on short legs were used as bedsteads for the most serious cases.

On the 23d the remainder of the field hospital was landed, and joined the first part at the palace, which was a large building, entirely empty, and wanting in many sanitary requirements.

On the 27th two stationary hospitals were landed and relieved the field hospital at the palace. This necessary change could not fail to cause inconvenience in the hospital administration.

The field hospital on being relieved at Ismailia took its belongings to the front. The men of the hospital corps were many of them new to their duties; they were not only without proper training, but they were obliged to transport the hospital material to the palace, all other help being employed in the landing and movements of the fighting portion of the army, and were constantly called on at all hours of the night to form stretcher parties for the moving of sick and wounded.

At this hospital 767 cases were admitted from the 23d to the 31st of August, and 1311 from September 1st to September 15th. As many as 350 were brought in at one time. After the battle of Tel el Kebir 194 arrived after midnight, two hours before a telegram intended to prepare for their reception (in the hospital having the largest casualty practice in London the number daily admitted is under twenty), all of which entailed a vast amount of labor not only in their reception but in their subsequent removal to transports for return home to leave room for further arrivals from the front. Some of these patients were very sick, and some badly wounded, but at this particular hospital the mortality was only at the rate of 0.5 per cent.

This hospital was administered as a non-dieted hospital, in which the daily ration of a healthy soldier is drawn for each patient, and all patients coming from their regiments are supposed to bring their ration for the day with them, and no separate arrangement is made for sick and wounded officers. The difficulties inseparable from this arrangement were avoided as far as possible by the free use of extra medical comforts, so that every patient on entrance was supplied with beef tea, etc.

During the first week the difficulties experienced were very great, but notwithstanding the great strain upon the hospital corps necessary to the establishment of the hospital it does not appear that anything abso-

lutely necessary for the treatment of patients was wanting. From the first landing military necessity required the most rapid advance. The difficulties of the landing were very great, and in consequence the troops suffered for want of food and ammunition, and medical stores came to hand but slowly. The surgeon-general seems not to have been in the confidence of the general commanding, and did not know that Ismailia was to be considered the base. The original plan was to make Cyprus the medical base on which the hospitals at the front should be evacuated, and to use in Egypt chiefly the hospital ships. A sudden change from this plan was also a cause of delay in properly supplying the hospitals.

During the whole occupation of the Khedive's palace there was no outbreak of erysipelas, hospital gangrene, or pyæmia; a similar freedom from epidemics existed at all other hospitals.

Of the surgical arrangements at the battle of Tel el Kebir we can give but the merest sketch. The stores and equipments of a field hospital were sent up the canal to the nearest spot and a field hospital established there at the very edge of the battle-field. At this spot the arrangements were complete for any attendance that could possibly be required. The boats were immediately prepared for the transportation of the wounded. The bearer companies accompanied the troops and established dressing stations at more advanced positions. In taking the wounded to the hospital they were brought so far on their way to the point in the rear to which they must eventually go. The men were then placed upon the canal boats and drawn by mules or horses to Kassassin and Ismailia. Many of them remained on board these boats until embarked on the Carthage, having water transport direct from battle-field to the hospital ship.

Of the care of the wounded at this battle General Wolseley remarked, "They were moved with very great comfort to the men themselves. I never saw wounded men better cared for than they were."

Attention was drawn to the medical conduct of the campaign chiefly by letters from various war correspondents, who seem to have picked up and repeated much idle gossip without taking pains to verify it. Of the complaints of the correspondents many were vague and impossible to trace. Only where particular instances were given was it possible to ascertain the truth or falsity of the reports. In one particular case it was stated that the arm of a certain trooper, who was named, was amputated at the shoulder-joint without an anæsthetic, a general deficiency of medicines being alleged. In this particular case it was shown that chloroform was used during operation and also at a previous examination. It was charged that one officer dosed his patients indiscriminately with the same pill taken from the same box. The box referred to was part of the regular field equipment divided into several compartments, each containing different drugs. Some of the complaints of the sick themselves sound very familiar to civilian ears, for instance, those of the men with digestive troubles who were kept on liquid diet, and "had nothing to eat;"

that of the officer with a wound which it was feared had entered the knee-joint who prescribed brandy for himself, and was denied the privilege.

What was probably the first of the series of letters throwing discredit on the medical management was based on the complaints of one of the remaining regimental surgeons of the household troops. While on the transport he complained of the want, among the drugs furnished him for use on ship board, of flaxseed meal, tincture of arnica, lead lotion, and tow, though the first was found among the ship's stores, and he had the acetate of lead. It would seem that the doctor expressed himself more warmly, than the actual condition of affairs would warrant, to the correspondent of the *Times*, and was surprised and shocked to see his complaints given the publicity of that widely circulated newspaper.

We have thus far tried to give in the briefest manner some of the leading features of the campaign, and a portion of the circumstances that led the public to feel that the medical conduct of the campaign was faulty. Next week we shall give an account of the evidence before the committee, more particularly that of General Wolseley.

AN AMENDMENT TO THE MASSACHUSETTS ACT TO PREVENT THE ADULTERATION OF FOOD AND DRUGS.

THE Massachusetts Legislature of last year enacted a law with similar provisions to those of New York and New Jersey, relating to the prevention of adulteration of food and drugs. The execution of the law was intrusted to the State Board of Health, Lunacy, and Charity, and the sum of \$3000 was appropriated to carry on the work. The Board appointed two competent analysts, who have done efficient service, at least five hundred samples having been analyzed by them since September last. By no means the least important work has been the inspection and analysis of the milk supply. During the past two months 88 samples of milk, chiefly from Boston, have been analyzed, of which number only ten, or less than 12 per cent. of the whole, proved to be above the standard required by the public statutes (thirteen per cent. of solids). The greater number were largely adulterated or *extended* with water. This is a widely different result from that obtained by the milk inspector of Boston.

Believing that more efficient means could be furnished for preventing this iniquitous work, certain members of the Legislature, especially from the agricultural districts, presented a bill early in the winter, amending the act of last year with reference to the milk supply. But certain unscrupulous manufacturers of adulterated food had so tinkered the bill in their own interests that its original meaning was entirely altered. Fortunately this bill, after passing the House, was defeated at its final stage in the Senate.

A new bill was then introduced, relating to the adulteration of milk, by the provisions of which \$2000 are added to the original appropriation, making a total

of \$5000 to be expended for the prevention of food and drug adulteration. It also provides that an account of the prosecutions under the act, as well as an itemized account of expenditures, shall be annually reported to the Legislature.

Singularly enough no allusion whatever is contained in the amendment to the subject of milk. As the evident intention of the framers of the bill, however, was to make special provision for this important matter, we have no doubt that their wishes will be fulfilled.

As affecting the infant life of our large cities, there is nothing more desirable than a pure and undiluted milk supply.

MEDICAL NOTES.

—A contemporary proposes to get rid of the use of "spoonfuls" as doses by the following expedient: Let each bottle (vial) be provided with a strip of paper pasted on, which strip is accurately divided with as many lines (marks) as the bottle contains doses to be taken, the lines to be numbered, beginning with the topmost, and let the direction read: Take one eighth (fourth, twelfth, etc.) part, etc., as the direction shall run, or, perhaps better, take one division, etc. The strip to reach from the bottom of the bottle (vial) to the top of the liquid, not farther.

—Dr. J. M. Toner, of Washington, has published a list, compiled in part from the returns of the census of 1880, of persons over seventy-five years of age, who were residing in the District of Columbia at the time the enumeration was made, June 1, 1880. The list contains the names of 1652 persons of seventy-five years of age and over out of a total population of 177,624. This number, on analysis, shows that there were 1007 whites — males 398, females 609; blacks, 539 — males 164, females 375; and mulattos 106 — males 26, females 80. It will be noticed that the predominance of the females is quite marked. Of the white males 282 were between 75 and 80 years of age, 118 between 80 and 90 years of age, and eight between 90 and 100 years of age. Of the white females 341 were between 75 and 80 years of age, 239 between 80 and 90 years of age, 27 between 90 and 100, and two over 100 years of age. Of the black males 79 were between 75 and 80 years of age, 69 between 80 and 90, 14 between 90 and 100, and two over 100 years of age. Of the black females 169 were between 75 and 80 years of age, 59 between 80 and 90, 36 between 90 and 100, and 11 over 100 years of age. Of the mulatto males 11 were between 75 and 80 years of age, 13 between 80 and 90, and two between 90 and 100. Of the mulatto females 35 were between 75 and 80 years of age, 36 between 80 and 90, four between 90 and 100, and five over 100 years of age.

—The Legislature of Connecticut has passed a law requiring that coroners in that State shall hereafter be attorneys at law, familiar with criminal practice and medical jurisprudence, and that one such person for each county shall be recommended by the State's attorney for such county to, and be appointed by, the judges of the superior court to hold his office for the

term of three years, and until another shall be duly appointed in his stead, unless sooner removed from office for cause. And the said coroner is required to appoint for each town of the county "an able and discreet person, learned in medical science, to be medical examiner." Upon these officers is devolved all the duties in detail which have hitherto *not* been exercised by coroners under the old régime, and such as are common throughout the United States outside of this commonwealth.

—A Canadian contemporary gives the following as a verbatim copy of a prescription actually dispensed by a druggist of the Lower Provinces from one of the most eminent practitioners of that vicinity. The disease of the patient is not stated, but we can recall no malady that it might not have been unless it were ingrowing toe-nail:—

"Ry Pot. Bromide, Pot. Chlor., Pot. Iodid., Pot. Acetas, Pot. Bi-Carb., Ammonia Chl., Ammonia Bromide, Ext. Calombo, Ext. Gentian, Ext. Taraxaci, Ferri Pyrophosphas, aa 3 ij.; Syrup Ferri Iodide, Tinct. Valerianas Amm., Dil. Phosphoric Acid, aa fl. oz. i.; Pepsine, gr. xxx.; Tinct. Cannabis Indica, Tinct. Digitalis, aa fl. oz. ss.; Syrup Calcii Lacto Phosphas, Glycerine, Syrup Tolu., Tinct. Cinchona co., aa fl. oz. ij.; Liq. Arsenicalis, fl. dr. ss.; Tinct. Arnica, fl. dr. ss.; Ext. Nux Vomica, gr. x.; Ext. Conii, Ext. Belladonna, Ext. Hyoscyami, gr. vi.; Chloroformi, gtt. x.; Quinine, 3i.; Alcoholis, q. s., fl. oz. xvi. M. Sig. Shake and take two teaspoonsful after each meal three times a day in a glass of milk."

NEW YORK.

—During the week ending at noon July 8th, which included the recent period of extreme high temperature, no less than 1051 deaths were reported in the city; the largest mortality of the year thus far. Of the deaths, 672 were of children under five years of age, and of these 377 died of diarrhoeal diseases. Eight persons died from sunstroke. The greatest mortality was during the last twenty-four hours, when 214 deaths were recorded at the bureau of vital statistics. Of these 125 were of children under five years of age, 97 of whom died from diarrhoeal diseases. Among the deaths from cholera infantum were those of three triplets who were born on the 9th of November last; all three children being carried off within forty-eight hours.

—The new Croton Aqueduct Commissioners have organized, and elected Mayor Edson president of their body. At the meeting when this took place a series of rules and regulations for the government of the commission were adopted, various standing committees were appointed, and it was determined that stated meetings should be held every Wednesday, commencing with the 1st of August. At a recent meeting of the Board of Health Prof. Elwyn Waller, chemist of the department, reported that he had made a careful examination and analysis of the Croton water, in accordance with a request of the Board, and had found the purity of the water entirely unimpaired, while there was at present no perceptible odor about it.

—A Harlem druggist who is charged with having caused the death of a man who applied to him for medicine for the relief of diarrhoea by giving him a mixture containing opium in fatal quantity, has also been arraigned in the Jefferson Market Police Court on the charge, preferred by the Medical Society of the

County of New York, through its president, Dr. David Webster, of practicing medicine without a diploma. He pleaded not guilty, waived examination, and was admitted to bail.

Correspondence.

MEDICAL EXPERT TESTIMONY IN THE CHICAGO LARD INVESTIGATION.

CHICAGO, July, 1883.

MR. EDITOR, — The lard investigation, now in progress before the Directors of the Chicago Board of Trade, has been the occasion of the demonstration of many interesting facts in chemistry and microscopy.

For the benefit of those who do not read Chicago papers, the facts in the case will be very briefly sketched: A lard speculator, Mr. Peter McGeoch, engaged to buy of Messrs. Fowler Brothers 500,000 tierces of prime steam lard. Prime steam lard is the technical term for pure hog fat. When the lard was ready for delivery Mr. McGeoch refused to accept it, on the ground that it was adulterated, and brought the matter before the Directors of the Chicago Board of Trade, seeking damages for the violation of the contract by Messrs. Fowler Brothers. These facts transpired six weeks ago, and since that time the Directors of the Board of Trade, about fifteen in number, have been weighing the merits of the case, in *secret* session, although the public has experienced no difficulty in obtaining all the news.

Mr. Delafontaine, chemist for the prosecution, testified that he had detected in Fowler Brothers' prime steam lard two adulterations, (1) tallow, (2) cotton-seed oil. The test employed for the detection of tallow is known as the stearine test, and depends upon the assertion that tallow contains more stearine than lard. As manipulated by Mr. Delafontaine, a portion of the suspected lard was treated with nine to ten volumes of a solution of equal parts sulphuric ether and alcohol; the mixture was well shaken up and allowed to stand for twenty-four hours, when the stearin (?) had crystallized out, the supernatant fluid was decanted, the residuum washed with ether and alcohol, filtered, dried, and weighed. Pure lard, according to Mr. Delafontaine, contains one per cent. stearine, while tallow contains a much higher percentage. The suspected specimens which were examined contained three to five per cent. stearine, and Mr. Delafontaine drew the conclusion that the lard was adulterated with tallow.

Professors Remsen, Doremus, Witthaus, Sharples, Habershaw, and Haines, chemists for the defense, have demonstrated the unreliability of the stearine test.

The average quantity of stearine in lard and tallow has been found to be indeterminable. Professors Remsen and Haines, in examining different specimens of pure lard, obtained results varying as much as 800 per cent.

Mr. Delafontaine's standard for stearine in lard was found to be entirely too low. It was conclusively shown that lard always contains at least three to five per cent. stearine, and very frequently exceeds these limits. The chemists for the defense found that the lard of Messrs. Fowler Brothers contained three to five per cent. stearine. They demonstrated that a mixture of lard and tallow, according to the stearine test, yielded less stearine than pure lard.

Professor Allen, of England, made the statement, some years ago, that it is impossible to determine, by a chemical analysis, whether a given fat comes from a hog or a beef, and the chemists for the defense have indorsed this opinion.

Mr. Delafontaine testified to the presence of the second alleged adulteration, cotton-seed oil, upon the evidence furnished by the elaidin test. This test depends upon the fact that when olein is acted upon by nitrogen peroxide (N_2O_2) it is converted into a solid mass, termed elaidin. Non-drying oils, of which olive oil is typical, when acted upon by nitrogen peroxide, are converted into elaidin; drying oils, of which linseed oil is typical, when acted upon by nitrogen peroxide, are affected very slightly; cotton-seed oil, occupying a middle position in its chemical relations, is affected to an intermediate degree.

The chemist for the prosecution treated a portion of the suspected lard with absolute alcohol, which dissolves out the olein, but has little action upon palmitin and stearine; the supernatant fluid was decanted, evaporated down, and treated with nitrogen peroxide. The fluid became only *partially* solid, and the presence of cotton-seed oil was regarded as demonstrated.

The chemists for the defense demonstrated the fallacy of the elaidin test in a convincing manner. Two specimens, one of pure lard, the other pure lard with an addition of ten per cent. cotton-seed oil, by weight, were treated according to the method of the elaidin test. The mixture of lard and cotton-seed oil solidified more rapidly than the pure lard. Three specimens of the suspected lard and one specimen of pure lard solidified with the same degree of rapidity. Further, the absence of cotton-seed oil was absolutely demonstrated by a number of tests, of which some of the most important were the sulphuric and nitric acid color tests of Professor Sharples. These color tests do not depend, as has been asserted, upon impurities present in the oil, but are perfectly characteristic with bleached oils or cotton-seed stearine.

The microscopical evidence, adduced by Mr. Hirsch for the prosecution, as to the presence of cotton-seed oil, was of a trivial character and damaging to whatever reputation he may possess. Mr. Hirsch testified that he had detected, by the aid of a magnifying glass, a cotton fibre in the lard of Messrs. Fowler Brothers, and inferred from this discovery the presence of cotton-seed oil as an adulteration.

The palpable absurdity of Mr. Hirsch's testimony was made manifest by the defense upon the ground (1) that it required for the accurate recognition of a cotton fibre a magnifying power of at least fifty to sixty D., while the glass of Mr. Hirsch had a power of six to eight D.; (2) that cotton fibres were constantly floating in the air, and their presence in the lard was accidental.

Dr. W. T. Belfield, Director of the Microscopical Laboratory in Rush Medical College, was retained for the defense at the suggestion of Professor Haines, upon 12th June, and he has since furnished, by means of his microscope, the clearest and most convincing evidence for the defense.

Dr. Belfield showed that by dissolving fats in ether and allowing them to crystallize out, crystals characteristic of lard and tallow may be readily obtained. The crystals from an ethereal solution of lard are rhomboidal plates with beveled edges, while those from an ethereal solution of tallow are plume-shaped, curved into

the form of an italic *f*. Dr. Belfield takes ten grains lard and dissolves it in two fluid drachms Squibbs' ether, and allows the solution to stand twenty-four hours, until the ether has evaporated and the crystallization is completed. The crystals are mounted in alcohol for examination, or may be secured after the dry method. The chemical constitution of these crystals has not been ascertained as yet, and no theory as to their chemical nature is advanced.

Twelve lettered specimens of lard were submitted to Dr. Belfield for examination by Dr. Tilly, who kept a careful record of the letters. The results of Dr. Belfield's examination coincided exactly with Dr. Tilly's list. Three of the specimens, pronounced by Dr. Belfield to be free from tallow crystals, were taken from the suspected Fowler lard.

Dr. Belfield has prepared micro-photographs of the lard and tallow crystals, as well from pure as adulterated specimens, and has presented them for inspection to the Directors of the Board of Trade. He states that the characteristic crystals of tallow can be certainly discovered when the admixture of the fat with lard amounts to five per cent. by weight; that he has reason to believe that even smaller admixtures — say two to three per cent. — can be detected with equal certainty, although he has not had time to establish this latter point beyond possibility of doubt. In the few weeks that have elapsed since the trial began no time, sufficient for an exhaustive study of these crystals, has been found, but Professor Remson calls these micro-photographs "marvelous proofs" of the purity of the submitted lard.

LETTER FROM NEWPORT.

MEETING OF THE SUPERINTENDENTS' ASSOCIATION.

MR. EDITOR,—According to promise I will give a brief account of the meeting of the Association of Medical Superintendents of American Institutions for the Insane, which was held at the Ocean House, Newport, from June 26th to June 29th, inclusive. This place was selected for the purpose of avoiding the loss of time in excursions to hospitals and other places of interest near the larger cities, while affording sufficient outside attractions of a kind to interest the members and their wives when off duty. It was voted last year to accept no invitations outside of Newport. Committees of three were also appointed to report on nearly a dozen subjects of interest to the specialty, so as to insure sufficient material for discussion. Another innovation was made by which, hereafter, a new president is to be chosen annually, the retiring president to give an address not subject to discussion. The address of Dr. Callender, of Tennessee, which was an eloquent review of the work of the Association, and an earnest vindication of its methods, amply justified this change. Dr. John P. Grey, of Utica, was chosen President, and Dr. Pliny Earle, Vice-President, for the ensuing year.

The new departure, I think, gave general satisfaction, and resulted in a successful meeting. Meetings were held three times daily, and many excellent papers were read and fully discussed. Dr. Clark, of Toronto, read a well digested report on Progress in Cerebro-spinal Pathology; Drs. Gale, of Kentucky, and Rogers, of Indiana, on Certain New Remedies and the Therapeutics of Insanity; Dr. Godding, of the government hospital at Washington, had a paper on the Rights of

the Insane in Hospitals; Dr. Hurd, of Michigan, read a very practical and useful article concerning the Management of the Insane, touching on the treatment of perplexing cases and troublesome symptoms. Dr. Chapiu, of the Willard Asylum, New York, treated of the Relations of the Public to the Insane in Hospitals, and Dr. McDonald, of Ward's Island, New York, gave an account of some annoyances, not to use a harsher term, to which he has been subjected by certain reformers and "protectors of the insane." Dr. Goldsmith described in detail a case of moral insanity coming under his observation. Dr. Fisher, of Boston, was appointed to prepare a memorial sketch of the late Dr. Clement A. Walker, and did so. Dr. Draper read a paper on the Rights of the Insane Outside of Hospitals, and Dr. Andrews, of New York, reported a case of medico-legal interest, in which the plea of insanity was unsuccessfully set up. As I write three weeks after the meeting, and from memory, I may have omitted some paper or action of the Association which should be noticed. If so, I beg every body's pardon.

Harmony and good feeling prevailed as far as I observed. Some of the New York brethren were a little disturbed by the recent shower of writs of habeas corpus which has fallen in that State. Dr. Grey expressed the "sense of the meeting" very well in describing his experience and method of dealing in such cases. Of course the writ must be answered, and a simple statement of facts under oath relieves the superintendent from further responsibility. If the patient is discharged by order of the court, the judge is responsible for the consequences. Judges who make experts of themselves are amenable to public opinion, which must sooner or later become enlightened in regard to the danger from discharged lunatics. Some dying echoes of the Guiteau controversy were heard incidentally to the reading of Dr. Goldsmith's and Dr. Godding's papers, but most members have come to see the necessity of "agreeing to disagree."

As next year is the fortieth anniversary of the Association it was voted to meet in Philadelphia, the original place of meeting, on the second Tuesday in May. This action was taken probably in order that Dr. Kirkbride, who has been in very feeble health, and others of the original membership might once more come together at the place which gave birth to the Association. Dr. Callender's address, which is to be printed, will give much interesting information concerning the early days of the Society. A committee also was appointed to prepare historical and biographical papers pertinent to the occasion. New committees on special topics were also appointed.

In spite of its resolution to avoid junketing the Association received and accepted a few invitations which were the occasion of much pleasure to those who participated, and did not seriously interrupt its programme of work.

The naval squadron, training ship, and Newport Asylum were visited one afternoon, the party embarking in a fleet of sail-boats, under the direction of Dr. H. R. Storer, President of the Newport Medical Society, but for this occasion admiral of the fleet. They were handsomely entertained at the latter place by the mayor of Newport and trustees of the asylum. Returning, the party were received by Dr. Fisher, of New York, Dr. Storer, of Newport, and several of the prominent summer residents of Newport on Washington Street. These glimpses of elegant interiors, of

broad piazzas, of antique fire-places, stairways, and chambers, and the stories of secret passages, false roofs, and smugglers' dark doings in the olden time are very pleasant in the retrospect, and still more so the necessarily brief but cordial welcome of our hosts. One perfect picture of lovely old ladyhood in Quaker costume and genuine antique surroundings will linger long in memory. The Association were also received by the trustees of the Redwood Library, and made an excursion to the Torpedo Station and Fort Adams. The Newport Hospital was open at all times to inspection, and promises to become famous among general hospitals by reason of the large bequest of the late General John Alfred Hazard.

On Saturday the thanks of the Association were voted to the physicians and citizens of Newport for their numerous courtesies, and the members remaining were discharged well pleased, and no doubt, in the language of their annual reports, "much improved."

T. W. F.

Miscellany.

CASE OF "CANCER-DRAWING."

BY ROBERT B. DIXON, M. D.

MRS. W., sixty-eight years old, was hit in the right breast, three years since, by a washing-machine handle which, at the time, was revolving rapidly. The spot, which was on the right side of the breast towards the axilla, became red, tender, and slightly painful. These symptoms continued for several days and then disappeared, leaving a slight hardness which continued and slowly increased in size. There was no accompanying pain, nor did retraction of the nipple follow. She, at any time, did not consider her symptoms sufficiently severe to consult a physician.

In January last, while visiting friends at one of the near suburban towns of this city, she was led to apply to a woman who extensively advertises herself as an "M. D.," a "graduate from a New York Medical College," and a specialist in the treatment of cancer, which she removes "without cutting, ether, caustic, or pain." This woman pronounced Mrs. W.'s case to be cancer of the breast, and said it should be removed at once, and also said she would "guarantee a cure by drawing it out."

Treatment was begun at that time by the application of a paste which was put on in a circle around and near the nipple. This application was continued daily for nineteen days, the paste being rubbed on a little lower down each day, till finally the base of the breast was reached. This paste, which was caustic in some form, ate rapidly into the tissues, at the same time producing intense pain, which during the night time became almost unbearable. Up to this time Mrs. W. had been going to the woman's office daily, but she now became so reduced in strength that the woman began to visit her. Poultices were ordered for the entire breast, and Mrs. W. was told that in nine days "the cancer would roll out like a saucer." These poultices were continued for three weeks, but no cancer rolled out.

At this time Mrs. W. was removed to her home in Maine, and came under the care of my father, Dr. Robert Dixon. Her condition, at this time, was indeed wretched. From a stout, robust-looking woman, in extreme good health, she was now reduced almost to a skeleton, was too weak to move without assistance, and

vomited nearly everything taken into the stomach. The chest wall was in a fearful state. The whole breast had been eaten away by the caustic, leaving a large sloughing sore about eight inches in diameter, from which flowed an abundant fetid discharge. The periosteum on the ribs, from the third to the seventh, had been entirely destroyed; this was followed by death of these ribs, necessitating later on the removal of several pieces, two of which were more than five inches in length, and of the full size of the ribs. At every respiration air whistled through some half dozen holes in the pleura, loud enough to be heard distinctly in an adjoining room. The pain in the side was excruciating, requiring continuous large doses of morphine. The irritable condition of the stomach necessitated rectal alimentation, by which means she was given stimulants and concentrated nourishment in as large and repeated doses as she could retain. Local antiseptic treatment was applied to the chest, and, later, as granulations formed from the chest wall, they were trimmed down with argentic nitrate.

In the course of three weeks the stomach got so it could retain a slight amount of bland nourishment. The granulations formed slowly, and now, six months from the time the paste was applied, cover all of the sore excepting a place the size of a silver dollar; it is doubtful if this spot ever heals over. Through this hole the lung can be plainly seen moving during respiration; the pleura has become firmly adherent to the lung.

Mrs. W. has greatly improved in flesh and strength, and now sits up for several hours each day. For weeks she was so feeble and exhausted that it seemed impossible that she could pull through, and without doubt good nursing and careful attention to alimentation saved her life.

The application of a caustic paste to an entire breast, when there was great doubt of the existence of a cancer to begin with, by an ignorant person, was barbarous in the extreme, and the results to the patient, in this case, horrible.

Boston, June 20, 1883.

SEA BATHING.

THE *British Medical Journal* (June 30th) discourses in a timely manner as to the indications and contra-indications for this practice, which is sometimes a healthy amusement and a therapeutic agent, and sometimes quite the reverse:—

"Shall I bathe?" This is a question which thousands of health-seekers will be asking of their doctors during the next few weeks. While the stimulus of a fresher air, of change of scene, and of new occupations, together with rest from accustomed work, are the elements from which the weakly, the worn, and the worried reap physical and mental restoration in a sojourn on the sea-coast, it is unquestionable that bathing in the open sea is, in itself, a powerful restorative agency, which many persons may employ with very great advantage. The universal experience of our race, through unnumbered ages, has shown the value of sea-bathing in both preventive and curative medicine. A good rule, laid down by an experienced physician, is this: in all cases showing impaired functional powers, without any manifestation of inflammatory symptoms, — in short, in those cases in which the exhibition of alteratives and tonics is indicated, — sea

bathing may, with proper precautions, be resorted to; it is contra-indicated in persons of plethoric habit of body, in cerebral congestion, in organic disease of the heart, in aneurism, and in all persons who have not the ability safely to encounter a comparatively severe shock; while it is also to be forbidden at certain periods in which the female constitution is not prepared for the application of powerful remedies. Because it tends, in certain conditions of impaired health, to cause determination of blood to the viscera, bathing in the open sea is generally unsuitable for persons disposed to congestive disorders of the lungs, kidneys, liver, and brain. Albuminuria, advanced anæmia, and a liability to hæmoptysis are also conditions which are usually accepted as contra-indicating sea bathing. It is hurtful to bathe babies in the sea; children under two years of age are too young to bear with advantage the comparatively severe shock of a cold sea bath. In old age, when the bodily powers are unequal to a vigorous reaction, sea-bathing may do much harm, especially in the subjects of extreme arterial degeneration. In suitable cases, and under proper precautions as to time of bathing and duration of exposure, a daily bath in the open sea is a valuable restorative. In individuals who are fairly robust, it is a stimulant alterative and tonic, promoting appetite, tissue-change, and excretions, and bracing up the nervous, vascular, and muscular systems. Sea bathing is especially useful as a powerful and unsurpassed tonic in delayed convalescence from acute

diseases, in many chronic affections, and in persons whose strength has become enfeebled by injurious excesses, by mental strain, or by unhealthy occupations."

SANITARY REPORT OF THE CONNECTICUT STATE BOARD OF HEALTH.

THE Sanitary report of the Connecticut State Board of Health says:—

"Malarial diseases, as the table of mortality indicates, are becoming more prominent. The commoner forms are dumb ague and malarial fevers, together with the chronic, ill-defined forms, but occasionally a case of congestive chills is seen.

"The eastern part of the State has not as yet been included in the malarial territory, although the line has been pushed to the eastward, and the disease has crept up the border towns at the southeastern end of the State, still there is no general prevalence even where cases have occurred. Generally, where the disease has secured a footing, reports of a greater prevalence are made, that is, comparing the frequency with that of the preceding months. If last year's reports are taken as a standard, a marked falling off is seen, with exceptions, and especially in the mortality. This apparently reached its acme in Connecticut in 1881, for last year shows a decrease of nearly a hundred in the deaths from malarial diseases, and a considerable increase in the mortality from typhoid fever."

REPORTED MORTALITY FOR THE WEEK ENDING JULY 7, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	1051	672	47.22	9.79	37.24	3.23	1.43
Philadelphia.....	846,984	504	270	30.59	6.41	20.90	3.42	2.66
Brooklyn.....	566,689	476	330	52.29	4.62	44.94	1.89	2.10
Chicago.....	503,304	276	187	40.18	4.34	27.87	4.09	2.17
Boston.....	362,535	200	94	32.50	8.00	18.50	7.50	1.00
St. Louis.....	350,522	235	156	42.45	5.11	32.38	—	3.37
Baltimore.....	332,190	275	182	48.72	5.93	37.09	3.27	2.91
Cincinnati.....	255,708	145	87	28.27	9.65	21.08	.69	1.38
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	—	—	—	—	—	—	—
Pittsburg..... (1883)	175,000	116	—	39.66	6.90	26.73	1.72	2.88
Buffalo.....	155,137	75	25	11.97	14.63	6.65	—	—
Milwaukee.....	115,678	40	18	12.50	17.50	5.00	—	2.50
Providence..... (1883)	116,755	54	21	22.20	12.65	20.35	1.85	—
New Haven..... (1883)	73,000	36	20	44.32	13.85	30.47	2.77	5.54
Charleston.....	49,999	45	21	45.55	13.33	24.44	—	—
Nashville.....	43,461	22	6	36.38	4.55	27.27	—	—
Lowell.....	59,485	30	17	43.33	16.66	26.66	—	—
Worcester.....	58,295	34	21	38.22	8.82	29.40	—	—
Cambridge.....	52,740	28	14	53.55	10.71	31.13	17.85	—
Fall River.....	49,006	30	18	29.97	6.66	26.66	—	—
Lawrence.....	39,178	12	10	33.33	8.33	33.33	—	—
Lynn.....	38,284	13	2	7.69	7.69	—	7.69	—
Springfield.....	33,340	21	14	47.62	4.72	33.33	9.52	—
Salem.....	27,598	9	2	11.11	11.11	—	—	11.11
New Bedford.....	26,875	5	2	40.00	—	40.00	—	—
Somerville.....	24,985	14	7	28.56	14.28	21.42	7.14	—
Holyoke.....	21,851	15	11	60.00	—	52.22	—	—
Chelsea.....	21,785	11	5	18.18	27.27	9.09	—	—
Taunton.....	21,213	1	0	—	—	—	—	—
Gloucester.....	19,329	4	1	25.00	—	—	25.00	—
Haverhill.....	18,475	9	2	22.22	—	—	—	—
Newton.....	16,995	7	1	28.56	14.28	—	—	—
Brockton.....	13,608	3	0	—	33.33	—	—	—
Newburyport.....	13,537	6	0	—	16.66	—	—	—
Fitchburg.....	12,405	3	1	—	33.33	—	—	—
Malden.....	12,017	—	—	—	—	—	—	—
Twenty Massachusetts towns.....	156,401	48	7	16.10	25.20	6.30	4.20	2.10

Deaths reported 3843 (no reports from New Orleans and District of Columbia): under five years of age 2214: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 1568, diarrhoeal diseases 1180, consumption 334, lung diseases 168, diphtheria and croup 116, scarlet fever 73, measles 53, typhoid fever 39, malarial fevers 31, erysipelas 19, whooping-cough 17, cerebro-spinal meningitis 17, puerperal fever 15, small-pox eight. From *measles*, New York 17, Baltimore seven, Brooklyn six, Boston and Pittsburg four each, Chicago and St. Louis, three each, Philadelphia and Lowell two each, Cincinnati, Buffalo, New Haven, Worcester, and Cambridge one each. From *typhoid fever*, New York eight, Pittsburg four, Philadelphia seven, Brooklyn, Chicago, and St. Louis three each, Boston, Cincinnati, and Charleston two each, Baltimore, New Haven, Nashville, Holyoke, and Haverhill one each. From *malarial fevers*, New York 12, St. Louis seven, Brooklyn four, Chicago, Baltimore, and Charleston two each, Newton and Northampton one each. From *erysipelas*, New York eight, Brooklyn and Cincinnati two each, Philadelphia, Chicago, Boston, Milwaukee, Newton, and Andover one each. From *whooping-cough*, New York seven, Philadelphia four, Pittsburg two, Brooklyn, Chicago, St. Louis, and Baltimore one each. From *cerebro-spinal meningitis*, New York four, Lowell three, Baltimore two, Philadelphia, Chicago, Cincinnati, Buffalo, Charleston, Worcester, Springfield, and Haverhill one each. From *puerperal fever*, Chicago four, Boston three, Buffalo two, Philadelphia, St. Louis, Milwaukee, Nashville, Worcester, and Fall River one each. From *small-pox*, Philadelphia and St. Louis three each, Boston and Baltimore one each.

Thirty-two cases of small-pox were reported in St. Louis, Buffalo six, Baltimore two; measles 37, diphtheria 17, scarlet fever 12, and typhoid fever six in Boston; scarlet fever 25, and typhoid fever six in Milwaukee.

In 40 cities and towns of Massachusetts, with an estimated

population of 1,186,820 (estimated population of the State 1,922,530), the total death-rate for the week was 22.04 against 16.49 and 16.97, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending June 23d, the death-rate was 18.7. Deaths reported 3086: acute diseases of the respiratory organs (London) 200, measles 101, scarlet fever 92, diarrhoeal diseases 85, whooping-cough 74, fever 44, diphtheria 17, small-pox (London two, Newcastle one) three. The death-rates ranged from 12.1 in Leicester to 25.1 in Liverpool; Norwich 14; Wolverhampton 15.5; Nottingham 16.5; London 17.6; Newcastle-on-Tyne 18.8; Birmingham 20.5; Sheffield 21.9; Leeds 22.2; Manchester 23.4; Blackburn 23.6. In Edinburgh 17.9; Glasgow 29.7; Dublin 25.2.

For the week ending June 16th, in 166 German cities and towns, with an estimated population of 8,407,157, the death-rate was 28. Deaths reported 4522; under five years of age, 2389; consumption 597, lung diseases 469, diarrhoeal diseases 270, diphtheria and croup 169, measles and röteln 121, scarlet fever 73, typhoid fever 47, whooping-cough 47, puerperal fever 13, small-pox (Berlin two, Thorn and Königshütte one each), four, typhus fever (Elbing one) one. The death-rates ranged from 14.7 in Wiesbaden to 42 in Cologne; Königsberg 30.1; Breslau 35.5; Munich 32.5; Dresden 28.5; Berlin 41.4; Leipzig 17.2; Hamburg 26.7; Cologne 42; Frankfurt a. M. 18.8; Metz 23.9.

For the week ending June 23d, in the Swiss towns, there were 28 deaths from consumption, diarrhoeal diseases 25, lung diseases 18, measles nine, whooping-cough four, diphtheria and croup two, puerperal fever two, scarlet fever one, erysipelas one, typhoid fever one. The death-rates were at Geneva 16.4, Zurich 10, Basle 21.4, Berne 24.8.

The meteorological record for the week ending July 7th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Daily Mean.	Daily Maximum.	Daily Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
July, 1883.																			
Sun., 1	30.051	64	76	53	64	40	70	58	NW	SW	SW	11	10	9	C	C	C	—	—
Mon., 2	29.811	72	84	51	66	62	90	73	SW	SW	SW	12	8	10	C	C	C	—	—
Tues., 3	30.051	76	86	65	76	43	76	65	W	W	SW	10	10	5	C	C	C	—	—
Wed., 4	30.008	80	96	64	71	43	90	68	NW	SW	SW	6	13	8	F	C	C	—	—
Thurs., 5	30.008	80	94	71	85	55	85	75	SW	SW	SW	11	12	6	F	C	C	—	—
Fri., 6	29.966	83	96	69	77	49	74	67	W	SW	W	7	8	5	C	C	C	—	—
Sat., 7	29.754	85	96	74	67	46	76	63	SW	SW	W	9	16	6	C	C	C	—	—
Means, the week.	29.950	77	96	51				67										4.45	.40

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JULY 6, 1883, TO JULY 13, 1883.

BAILY, E. L., colonel and surgeon. In addition to his present duties to take charge of the office of medical director Military Division of the Pacific during the absence of the medical director. Paragraph 2, S. O. 64, Military Division of the Pacific, June 30, 1883.

SUTHERLAND, C., colonel and surgeon, medical director Military Division of the Pacific. Granted leave of absence for one month, with permission to apply to the Adjutant General of the Army for extension of two months. Paragraph 1, S. O. 64, Military Division of the Pacific, June 30, 1883.

CAMPBELL, JOHN, lieutenant-colonel and surgeon, medical director Department of the South. Leave of absence on surgeon's certificate of disability granted by S. O. 50, Department of the South, May 21, 1883, extended one month on surgeon's certificate of disability, with permission to leave the Department of the South. Paragraph 7, S. O. 156, A. G. O., July 9, 1883.

PERLEY, HARRY O., captain and assistant surgeon. Assigned to duty at Fort Pembina, D. T. Paragraph 1, S. O. 118, Department of Dakota, July 5, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JULY 14, 1883.

HUDSON, A., medical inspector, assistant to Bureau of Medicine and Surgery, and Passed Assistant Surgeons S. H. Griffith and E. H. Green granted leave of absence for one month.

BOOKS AND PAMPHLETS RECEIVED. — An Alphabetical List of the Names of all Persons residing in Washington City and the District of Columbia June 1, 1880, aged Seventy-Five Years or more. Compiled from the United States Census Reports of 1880. By J. M. Toner, M. D.

Malarial Poisoning the Cause of Hæmaturia. Reprint from the Transactions of the Medical Association of Georgia at its Thirty-Third Annual Session, 1882. By W. O'Daniel, A. M., M. D., Bullards, Ga. Macon, Ga. 1883.

The Microscope and its Revelations. By William B. Carpenter, C. B., M. D., LL. D., etc. Sixth Edition. Illustrated by 26 Plates and 500 Wood Engravings. Vols. I, II. New York: William Wood & Co. 1883.

Handbook of Electro-Therapeutics. By Dr. Wilhelm Erb, Professor in the University of Leipzig. Translated by L. Patzel, M. D. With 39 Wood-Cuts. New York: William Wood & Co. 1883.

Lectures.**ON MEDICAL EVIDENCE AND MEDICAL WITNESSES.**

ABSTRACT OF A LECTURE DELIVERED AT THE HARVARD MEDICAL SCHOOL.

BY F. W. DEXTER, M.D.,
Lecturer on Forensic Medicine.

It is the object of evidence in its legal sense to establish facts for judicial determination. Such evidence consists of written documents, denominated documentary evidence; and of the depositions, the sworn statements by word of mouth, of living witnesses, — the so-called parole evidence. A distinction is to be made between testimony and evidence; the former includes the latter and is its basis. Testimony is the declaration of a witness; evidence is the effect of that declaration on the mind, or the degree of light which it affords to the point at issue. All evidence, therefore, must be testimony, since the greater includes the less; but all testimony is not evidence.

Parole or oral evidence is derived from two kinds of witnesses, — ordinary witnesses who state facts which have been under their personal observation, and experts, or skilled witnesses, who interpret those facts in the light of their experience or superior knowledge. Ordinary witnesses tell what they know; experts are called to say what they believe, to testify upon matters of opinion. Physicians, like others, are summoned in both these capacities to discharge the functions of both ordinary and expert witnesses; not infrequently to discharge both at the same time in the same trial. They are liable to be called into court as ordinary witnesses because in common with all other persons they may be at any time observers of acts and of the effects of acts of an unlawful character; and they are subject to requisition as skilled witnesses by virtue of their profession and of their acknowledged acquaintance with matters of which court, counsel, and jury are ignorant.

It is obvious that as an ordinary witness a medical man is in the same relation as any individual who speaks of facts within his own knowledge or observation. What is required of him is a memory retentive enough to enable him to recall what he has seen, or heard, or done, sufficient intelligence and acuteness to help him in discerning the usual import of words and deeds, and enough presence of mind to bring out the results of all this at the proper moment in answer to a well-directed system of questioning. Of course the occasions in which you may find yourselves in the relation of an ordinary witness are as varied as is human experience itself. A physician cannot move through life wholly oblivious or unobservant of what is going on around him. He is none the less a citizen because he is a doctor, and his profession gives him no exemption from such civil duties as promote good order and public morality, service on juries and in the militia alone excepted. But his profession inevitably exposes him, more frequently, perhaps, than would any other avocation, to become the witness of unlawful acts, or, at least, of their direct or more remote effects. A man is shot or stabbed; a physician is straightway summoned and becomes a material witness in the case. Poison has been given, a rape committed, a spine injured in a railroad accident, a femur broken in consequence of a defect in the highway, — the doctor is

called in each instance to attend the patient, and having obeyed this summons, he cannot evade the later summons which requires him to tell, under oath, the truth and the whole truth in the cause now in hearing. He finds that he is compelled to practice forensic medicine, whether he likes it or not, and under circumstances which he cannot control.

There is one kind of testimony to which the physician is intimately related by virtue of his office. As you may be aware, the courts reject hearsay testimony as inadmissible; that is, the witness must confine himself to what he himself saw or heard or did, and he cannot present what came to him concerning the case through the interposition or statement of a third party. An important exception to this rule is afforded in the dying declarations of the victims of homicide. The general principle on which this kind of evidence is admitted is derived from the Roman law; it rests on the fact that these declarations are made in extremity, when the patient is at the point of death, and when every motive to falsehood is silenced. A situation so solemn is considered by the law as creating an obligation equal to that imposed by an oath in court. But in order that such declarations may be admitted, it is essential that they be made by the declarant while clearly under a sense of impending death; and this realization on his part must be proved. It is in this connection that the medical attendant becomes important; it is by his testimony mainly that the state of mind of the deceased at the time of the declaration is to be shown. This mental condition of the dying man, his belief in immediately impending death, may be demonstrated by the express language used by him, or may be inferred from his evident danger, or from the opinions of the medical or other attendants stated to him, or from his conduct, or from other circumstances of the case, all of which become matters of evidence.

It is proper that you should know that dying declarations are as admissible when in favor of an accused party charged with the death as when they are adverse to him. It is no objection to their admissibility that they are made in answer to leading questions, or after earnest solicitation, or by signs as well as by words. It is clear that the medical attendant's position in such a contingency is one of great delicacy and responsibility. Every word spoken to or by the deceased, and the order of the conversation, ought to be submitted with the utmost accuracy. Although you may repeat this as oral testimony, it will be of essential help if written notes are made at the time of the declaration. Although it is admitted that the statement of the dying man may be secured by leading questions, I strongly advise you to avoid that method, lest your intentions be misinterpreted; receive whatever is offered to you as the voluntary avowal of your dying patient, but do not become an advocate for the purpose of cross-examining him.

And I may remark, in this connection, that the habit of note-taking, excellent in the ordinary routine of professional work, is of the greatest help in all medico-legal cases. Taylor says that the first duty of a medical jurist is to cultivate a faculty of minute observation, and that it is certainly the fault of medical men that they are not generally better prepared for the questions which are likely to arise in a case on which they know they will be required to give evidence. Thus, in reference to a case on which a charge of murder may be founded, the physician who is called in at

the beginning frequently omits to observe carefully and to note minutely many circumstances, because they appear to him simply trivial or irrelevant, although at the subsequent trial he finds to his dismay that they actually become turning points upon the question of innocence or guilt. Cherish, therefore, the habit of taking detailed and accurate notes in any case which may possibly in the future give rise to a medico-legal inquiry. Be careful of dates; a memorandum of the hour, day, and month of any transaction being frequently of great consequence. If the notes cannot be written on the spot, write them as soon as may be; they lose their value in proportion to their remoteness from the occurrence to which they refer. Save the originals; besides avoiding thus any errors in copying, these first drafts may serve as special mnemonics of the time and circumstances under which they were made. It is often of great assistance to the memory to make a rough sketch of rooms or premises in which dead bodies are found or a homicide has been committed. Do not be afraid of noting too many matters; it should not be left to the policeman to say whether there were any marks of blood on the dress or hands of the deceased, or on the walls or furniture of the room. It is one of the arts of counsel who defend an indicted prisoner to endeavor to discover wherein the medical witness has made errors of omission; the omission may be of no medical importance whatever, but it is usually placed before the jury for much more than it is worth, so that the accused gets the full benefit of any doubt in the matter.

If I were to sum up the qualities of a successful and creditable medical witness in a few words I should say that he possesses (1) the faculty of accurately observing all things about him; (2) a retentive memory; (3) sincerity of purpose and a mind unprejudiced; (4) a well-balanced temperament that will remain unmoved under circumstances of great provocation; and (5) skill in expressing tersely and intelligibly what the mind desires to impart.

I have thus dwelt on the function of the ordinary medical witness because during your earlier professional life you will be called twenty times to fulfill this relation to every single occasion in the more special office of an expert. It is right, however, that you should have some notion of the true sphere of the latter. Expert testimony begins where ordinary testimony ends. Exactly where this point of division lies is a question of some moment to medical men. What are matters of fact as distinguished from matters of opinion? The answer to this comprehends the difference between ordinary and skilled testimony. There can be no doubt of the character of events which lie within the observation of any intelligent person so far as it relates to this question of testimony. If you saw A strike B with a club, B falling immediately, and A running away, it would require no special skill to observe the facts correctly, and to narrate them in court. If, again, you were called as a surgeon to attend B after his injury, and you found a contused scalp wound and a depressed fracture of the skull, with much hæmorrhage from the wound, and brain substance exuding through the fissures in the broken bone, the man insensible, and at length dead, all this is within your ordinary observation as a medical man, and becomes a matter of ordinary testimony in a trial for homicide. But supposing that in a capital trial you listen to all the testimony, and thus become acquainted with a

chain of circumstances each one of which depends on its relation to all the rest for its value and significance in the case, and supposing that at the end you are called upon to interpret the medical circumstances and links in this chain, to connect them harmoniously or to show their incongruity by virtue of their want of harmony with known laws of science with which you are acquainted, then you are an expert medical witness. Or suppose, as in the memorable murder case associated so indelibly with the college building in North Grove Street, that certain mutilated human remains from a privy vault are placed before you, with some half-consumed bones taken from the ash-pit of a furnace, the whole collection comprising only a part of a human body, and you are required, without any knowledge of their real history, to state, under oath, if in your opinion they belong to one and the same body, to build up from these incomplete fragments a probable whole, and thus to establish the central and essential fact, the identity of the victim of a homicide. Surely he who performs this task, as Dr. Jeffries Wyman did in 1850, deserves and receives the highest praise as an expert medical witness.

But between the two extremes which I have here illustrated is a considerable field wherein medical evidence is demanded, but in which the character of the testimony, whether it be ordinary or expert, is uncertain. I refer to cases which do not require the expression of a medical opinion, nor, on the other hand, are concerned with facts of ordinary simple medical observation, but are cases which involve data of common medical knowledge. Can a medical man, summoned as an ordinary witness, and already paid as such, claim the privileges pertaining to an expert before he answers questions requiring medical and technical knowledge for their correct elucidation? In a case of poisoning, for example, can the court compel an ordinary witness, not serving as an expert, to describe the symptoms of poisoning, the time which is required for their full development, the dose which would determine fatal effects, and the post-mortem appearances? The answers to such questions are not matters of opinion, but are matters of fact, supposed to be within the knowledge of all properly educated medical men when they undertake the cure of diseases. Whether the State has any right to this knowledge from an ordinary witness is an open question, which within my own experience has been decided both ways by different judges. In any case, however, whether civil or criminal, in which counsel, examining you as an ordinary witness, enters on that ground, I believe you will have a perfect right to decline to answer except under the formal instructions of the judge. If, therefore, a question comes, more or less remote from the actual facts to which you are testifying, I advise you, for your own comfort and for the sake of your profession, to appeal to the court for instruction whether or not the answer to the question involves expert skill within the meaning of the law, and whether, on that account, you, as an ordinary witness, may not decline to answer it. This may seem a trivial matter to some of you, but it really involves a grave issue, a constitutional right, the right of every man to his own, and the question whether a physician's knowledge of his profession is not thus to be defended.

But the medical expert, fully recognized as such in court, is, in theory at least, in a most honorable and dignified relation. His function is judicial in a certain

sense, for he interprets the meaning of medical facts just as the judge interprets and decides the law. Such being the theoretical function of the expert, what qualities ought he to possess? In the first place the very term expert implies the possession of special and superior qualifications in point of knowledge and experience. He is not presumed to know everything, however convenient omniscience would be on the occasion of the cross-examination, but he is expected to be fully acquainted with the latest and most exact knowledge of the scientific matters concerning which he testifies.

But the ideal expert must not only know the principles of his science, he must also have a special aptitude in applying those principles to the data which are supplied to him; he must have a judicial mind. He will not jump at conclusions, nor form his opinion till he is master of the facts on which he is to base that opinion. The most successful expert will thrive better by deliberation rather than by intuition.

But he will be cautious in stating his conclusions as well as deliberate in forming them. A really honest purpose will lead him to avoid dogmatism. Every physician of sensibility and intelligence must know the limitations of medical science, and remember how readily the extraordinary knowledge of to-day becomes the ordinary knowledge of to-morrow, how unmercifully the doctrines of the fathers are upset and undermined by the observations of the sons. The conscientious expert will, therefore, be slow to make positive assertions about matters in medical science which require fuller investigation to become settled principles, always recognizing the difference between the possible, the probable, and the absolute.

Finally the expert will be impartial, which is but another way of saying that he will be honest. Properly speaking he is not a witness on either side; he does not testify to facts which form the basis of the judgment; he is not concerned with the result. When he has stated what certain proven facts indicate from the medical point of view his office ends. He is not to answer with regard to the accused, Is he guilty? Is he insane? Those questions are for the jury. "Every witness," says Lord Hatherly, "should eschew altogether the notion of partisanship. He should be ready to give his opinion frankly and unreservedly, regardless how it may tell. He is there not as an advocate, but in order to inform the court and jury to the best of his judgment."

(To be concluded.)

Original Articles.

NEURASTHENIA; ITS CAUSES AND ITS HOME TREATMENT.¹

BY J. S. GREENE, M. D., OF DORCHESTER.

THE word Neurasthenia is here taken, not attempting an accurate definition, to signify that state of exhaustion, reduction, or suspension of available nerve power popularly known as nervous prostration. It is scarcely necessary to add that this is a condition entirely distinct from anæmia, and also from hysteria, though these diseases may be associated with it, and are possibly sometimes mistaken for it.

In the discussion which followed the reading of a paper on Subinvolution of the Uterus and Neurasthenia, before the Boston Society for Medical Observation, about two years ago, Dr. Weir Mitchell said that he preferred to use the term nervous exhaustibility rather than nervous exhaustion. The distinction is obviously a valuable one, but the latter term has a convenience and fitness if used simply as the expression of the ultimate condition whereof the liability or predisposition is signified by the former. In the remarks which follow both terms will be made use of, according to these their primary and natural meanings. It is not only convenient but necessary, in pursuing my subject, to give to the term nervous exhaustibility a wider significance than did the distinguished authority whom I have quoted.

I take this postulate: That it is nervous debility or nervous exhaustion, nerve-tire or neurasthenia, interchangeable terms, or terms standing for varying degrees of nervous disability, with which we as physicians are confronted in individual patients; while nervous exhaustibility is a characteristic of the age in which we live, and of which we as social scientists and medical philosophers must take account.

I believe that the nervous exhaustibility of the present day has its origin in the immense uprising of mental activity produced by those supreme factors in modern civilization, free schools and a popular press.

When we contemplate the astonishing inventions and discoveries which characterize the age, each in turn eclipsing its predecessors, and each powerfully helping to complicate the maze and impel the dizzying whirl of human activities, we cannot wonder at the evidences of over-tension and the increasing proportion of those who have to pause by the way. The one set of facts is the inevitable and logical complement and accompaniment of the other, and both are directly traceable to the invention of printing.

It seems as if humanity in this age of the world is reaching the end of its tether; that it is putting into action all its capacity, leaving nothing in reserve. The men and women of to-day and their successors, far more than those of former times, are feeling, or are destined to feel, the limitations of their power to do.

A statement of modern tendencies may be formulated thus:—

First. Immense increase and general diffusion of knowledge and rapid inter-communication awaken dormant energies, develop latent capacities, quicken mental activities, and there results nervous exhaustibility. So far all is normal and legitimate.

Secondly. Activity incites to ambition, emulation, competition, hurrying and striving, and there results tension of faculties and super-activity. Here the danger line is reached.

Thirdly. Hurry and competition bring over burden of responsibilities, cares, anxieties, jealousies, distractions, and these are the chief immediate causes of nervous exhaustion.

I necessarily omit from this discussion a class of cases much fewer in number than those with which we chiefly have to deal,—a class where idleness, lack of occupation and of definite purpose are commonly associated with habits of emotional excitement from reading trashy, sensational literature and with practices of vicious self-indulgence. I am not dealing here with the vices, but with the honest errors and natural tendencies which our age has especially developed.

The influences which lead to nervous exhaustion are all-pervasive. They permeate the atmosphere of our

¹ Read before the Massachusetts Medical Society, June 13, 1883, and recommended for publication by the Society.

modern civilization as bacteria do the air we breathe. We are all to a greater or less degree impressible by them; but, like the living microscopic germs, they make their easiest victims of those whose powers of resistance are weakest. It is not effort, it is struggling and striving; it is not business, it is competition; it is not education, it is cramming; it is not social pleasures, it is social emulations and envyings; it is not over-heated rooms and ill-ventilated houses, it is living on too large a scale; in fine, it is not work, it is *worry* that is sapping the energies of our people.

Now starting from the broad postulate here taken, many would reason, as many in fact do reason from a much narrower premise, that the case is well nigh hopeless for the coming generations of Anglo-Saxon stock. I am not of these pessimists. I do not expect that the race is to die out because it has not fully recognized its limitations, any more than I believe that modern civilization is to be given up to anarchy because it contains aspiring elements which ferment and upheave when confined by tyranny. It is possible that the Anglo-Saxon race in America, being foremost in development and therefore first to experience the limitations of human capacity, will also be first to appreciate the risks and to perceive and apply the correctives; will instruct by their example the slower moving peoples as they, in their turn, approach the danger line. With the poison may be found the antidote.

Nor am I of those who think that this whole matter is to be settled by comparisons of columns of figures, and disposed of as a question of vital statistics. It is mainly perhaps a question of mental quality, a something that the census-taker does not reach. No one can assert that mental power is cut down, that the will which dominates the world is weakened, because the nerves, the medium through which mind moves in its material investment, have sometimes to relax their tyranny over the flesh. Indeed it may be that the evil which we are discussing is less serious in its ultimate issue than its present manifestations threaten; inasmuch as it may be in considerable degree a conservative provision, destined to restrain, and thereby to maintain and transmit the forces which shall hereafter lead in the onward march of humanity.

In the mean time, in all the grades of neurasthenia, the one practical issue is *adjustment*; — adjustment of the race to its present environments, — adjustment of the individual to his and her present limitations; and this eminently practical issue is everywhere, with very rare exceptions, a practicable one. I say then that nervous exhaustibility, as a prominent characteristic of modern life, is the natural and legitimate concomitant of the rapid diffusion of intelligence and evolution of ideas; while nervous debility or exhaustion is the untoward result of a failure on the part of the individual, through his own mistakes conjoined to the errors of his progenitors and guides, to properly adjust his activities to his capacities.

It will serve my present purpose to very briefly indicate some of these special errors which may be called errors of mal-adjustment. And first there are ante-natal influences. The parents have the nervous temperament with the possibilities of nervous exhaustion written on every lineament, with probably the tracings of care and fatigue visible beside. The bride has assuredly wearied herself to the last degree with preparing the bridal trousseau and with calls and en-

tertainments and excitements; while the bridegroom with his own late hours at business or dissipation, has very possibly smoked six or eight cigars a day. Then perhaps during the fatigues of a wedding journey, and certainly in the midst of a tumult of social excitements and domestic cares, and of anxieties, not the least of which is the dread of offspring, begins under protest, to the horror and dismay of its progenitors, after numerous postponements secured at the cost of special aggravations of nerve function — begins the new human being.

Without particularizing minutely the progress of this life thus inauspiciously started, there is one other interesting fact of ante-natal influence to take note of. The woman, convinced sorely against her will that she is to become a mother, proceeds to despoil herself of energy after a new fashion. Whereas until now she has worn and wasted her strength in striving to do, henceforth during the term of her pregnancy she will continue the spoliation by striving to *be*, — not therefore, however, omitting the doing. Besides continuing all her wonted activities, she now undertakes unselfishly, for the welfare of the unborn child, to become a saint. She disciplines herself to equanimity and cheerfulness; suppresses feelings of irritability or despondency; resists all temptations to tearfulness; makes herself a very female Mark Tapley for being jolly under adverse circumstances. In this constant effort of will to control emotional manifestations, which are the natural relief of over-tension, she maintains and increases the tension at the expense of her own strength and the vitality of her offspring. In making herself a saint she becomes also a martyr to a mistaken idea of duty.

In proceeding with the subject, it is necessary to remark that the influences acting upon the child and youth are mainly calculated to develop and enhance the nervous excitability implanted in its constitution. These influences can barely be suggested here.

The graded system in the public schools, with the tests for promotion from class to class found solely in percentages of success in repeating from text-books, combined with the large increase in the number of branches required to be studied, and in the number of examinations to be undergone, makes the period of school life, in our day, a period of continuous strain and worry which inevitably results in over-tension. Likewise at home the child is introduced to the excitements of society from the tenderest years. The *boy* is still extant and flourishes under some difficulties; but of what was formerly known as the *girl* there are at present but few living specimens. She is absorbed and merged into the young lady. This young lady, not having had the opportunity to pass gradually from girlhood into womanhood, but having sprung into womanhood from childhood, with almost the celerity with which Venus rose from the sea, brings of organs and functions especially appertaining to womanhood such ill-conditioned equipment that her poor nerves, whether exhausted or not, must be perpetually hampered and fretted, perhaps bullied and half-starved.

Now having instanced some of the most noteworthy among the special exciting causes of neurasthenia, we come to consider its treatment. As already remarked, the successful management of these cases consists in adjusting the patient to the situation; — still better, in aiding and indoctrinating the patient in the principles and practice of self-adjustment. The patient cannot ad-

vance in this without the constant supervision of the physician; nor can the physician succeed without the intelligent and docile coöperation of the patient. Happily this is generally attainable, since the sufferers are usually quite capable of following a train of reasoning to its logical conclusions, and shaping their course of action consistently thereupon. With many their whole scheme of life has been laid upon an impracticable foundation; yet from childhood they have adhered to it heroically in consequence of erroneous teaching, and a mistaken estimate of duty. With such the remoulding of life to a new shape is slow and the work of time. Conviction comes by degrees, precept and doctrine serving as the interpreters of the lessons of stern experience. The physician himself must study with attention each individual case, and patiently form and adopt a plan of management. He will often have occasion to modify this plan to conform to a corrected estimate of the situation, or the powers and qualities of the patient; and the patient should understand this. The physician may often resort to illustrations to enforce his views, and to make clear the situation and the requirements of the case. The patient may be likened to a bank whose specie reserve has been dangerously reduced, and which must contract its business until its reserve is made good; or to a spendthrift, who has squandered his inheritance; or to a merchant, who has expanded his business beyond what his capital justifies, until he comes to the verge of bankruptcy. The one must collect promptly and shorten his credits, and otherwise gradually but steadily and resolutely restore his business to a safer basis; the other must rigidly limit his expenditure until it is sufficiently within his lessened income, with a margin for emergencies.

It may be explained that to have available strength for every-day use always implies the possession of a reserve fund of latent strength lying unseen and dormant like the specie in the vaults of a sound bank; that when, by continuous overdrafts, this reserve has been greatly impaired, more or less continuous but surely prolonged repose must be had without expenditure of nerve power until the nerve centres shall have regained a margin of force without which there cannot be healthful activity. When patients reproach themselves for nervousness, inefficiency, and lack of self-control, and propose to exercise more will and put forth stronger effort, they may be reproached for thinking to further compel by whip and spur the tired, jaded steed which has only too willingly and too patiently borne both burden and abuse.

I object emphatically to patients comparing themselves with others, and repining because they cannot accomplish as much as their neighbor. They need to be taught, as Thomas Carlyle says in *Sartor Resartus*, that "The fraction of life can be increased in value not so much by increasing your numerator as by lessening your denominator."

Very often, in the home treatment of cases of neurasthenia, some member of the family needs to be dealt with, the husband, perhaps, or the wife or the mother, and made to see the situation in its true aspect, to secure a necessary element of coöperative influence. Infelicities of expression and inconsiderate allusions are sometimes the precious prerogatives of a well meaning and well beloved one which cannot be taken away without undue violence, and are harder to neutralize than the spiteful shafts of intentional unkindness. Thus the patient and the environments must be mutually

adapted, and a wholesome mental attitude and moral atmosphere of cheerful tranquillity and patient, persistent hopefulness secured. When this is assured we may feel confident of success in due time. I would discountenance all attempts, however, on the part of the patient to have a time fixed in advance when recovery shall be complete, or even when certain recognized stages or indications of progress shall be reached. Sufficient for the patient that the earliest signs of actual improvement be pointed out by the physician, and that later ones apparent to the patient be verified. Only by observing the rate of real advance can any trustworthy estimate be formed of progress to come; and the physician may disclaim the possession of any other means of judging than this which is common to himself and the patient alike.

The first thing to do on entering upon the treatment of a case of neurasthenia is, to employ the military figure of speech, to sound a retreat; and the question first in order is how far to fall back, and where to make a stand. Sometimes the demoralization is such that there is evidently nothing to do but to retreat promptly to the ships or to the ultimate base of supplies; but very frequently it is justifiable generalship to pause and measure swords with the enemy; and a strongly defensible position may be taken and held considerably in advance of that base.

It may be decided that the patient remain constantly in bed for an undetermined but comparatively brief period; or only that a definite increase be made in the number of hours devoted exclusively to repose. The latter course offers the great advantage of leaving a portion of time daily wherein some, even if but little, exercise in the open air shall be taken. If the former plan be deemed advisable, it may or may not be necessary to introduce passive exercise, — massage or faradization, or both, as a substitute for active movement. If the circulation be feeble, the extremities cool, the skin clammy, and the muscles weak, such measures are distinctly indicated.

A capacity for taking extra sleep is highly to be prized as a means towards restoration; but some there are who cannot spontaneously attain it. If the effects of overstrain be heavily visited upon the brain, causing actual insomnia, restlessness, excitability, it is expedient to compel sleep and a dormant disposition by liberal doses of bromides, perhaps to some extent associated with chloral. In a large proportion of cases I have found an equally available and more satisfactory course than constant stay in bed to be its daily occupancy for twelve, sixteen, or eighteen hours out of the twenty-four, with darkened room and no interruptions except stated ones of the briefest duration for the taking of sustenance. The aim is to secure the largest amount possible of this time of quiet to actual sleep.

The patient may occupy the remaining fraction of the day at discretion, including one, or perhaps two, meals taken with the family, with this stipulation, that as much active exercise out of doors shall daily be taken as the strength will permit.

Generally every form of physical effort within doors, such as standing, ascending and descending stairs, is discountenanced, the powers being reserved for investment in those activities which should bring returns of new strength. There are few so delicate or so exhausted that they cannot bear with benefit, seated over the edge of the bath tub, a dash of cold water down the back from a sponge squeezed over the shoulders; and

many can themselves secure the needful prompt reaction from the slight shock by briskly handling the bath towel. Such efforts, which may be termed the calisthenics of the bath room, should be encouraged according to the patient's powers.

As much food should be taken as can be well digested; and the determination of the amount of repose and of exercise respectively required must often be made more with reference to the working of the function of digestion than of any other function. When a large share of a profound general enfeeblement is visited upon the digestive function to such an extent that the organs of digestion are as indifferent to food as the tissues are disinclined to select and appropriate their pabulum, tonics are often for the time useless, and active exercise impracticable. Here is a case for continuous stay in bed, with passive movements and exclusively liquid diet plied vigorously and systematically. Here the logical necessity of the special plan of management identified with the name of Dr. Weir Mitchell is inexorable up to a certain point.

The total nerve force available is so small that the stomach needs all of it; all functions but those of digestion and assimilation need to be suspended, or at least made merely accessory for a time, and the individual reduced practically to a single organ; — *venter et preterea nihil*. It is merely carrying out to its logical conclusion a principle which needs to be recognized and extensively applied. It is that in neurasthenia, nerve power being deficient or unavailable, and insufficient to go around and give each organ and function a supply, the digestive organs are entitled to a full share reckoned by the standard of normal strength.

The function upon which the whole organism depends for the generation of force has a preferred claim, and only such overplus as there may be after this claim is fully satisfied should be distributed among the other creditors.

Little need be said of the use of medicines. Their rôle is a subordinate one; their usefulness is incidental, but not therefore trivial. A typical case of neurasthenia in a healthy subject may sometimes be successfully managed with scarcely any aid from drugs; but such cases are, perhaps, exceptional. The possible need of bromides has already been referred to. The persistence of distressing headaches will suggest the use of caffeine or some such nervous stimulant. It is at once an indication of, and an aid to, nutrition, that the bowels be free. Constipation, like headache, is often a symptom of neurasthenia, which will disappear under the policy of adjustment. If it do not, laxatives are needed. Medicines to aid the digestion and food tonics will be introduced at the discretion of the physician.

If there be uterine trouble this may sometimes be ignored or disregarded; but it should receive considerable and effective treatment in that class where the local disorder is one which does not yield to general recuperative influence alone, but which remains to vex the nerves and retard the nutrition unless relieved by interference.

In discussing this subject an underlying idea has been that, as a rule, there should be, and generally there is, no place so suitable for the management of neurasthenia as home; and that the family physician should regard such cases as his peculiar charge, and success in their treatment as his duty. The physician who can appreciate and make available the advantages and

resources of the home will find no difficulty in deciding at what point or stage in the treatment of a case a temporary change of scene shall be expedient and desirable; nor will he fail to recognize and set apart in the category those cases, comparatively few in number, where some of the surroundings and influences of home are essentially harmful and radically incapable of adjustment, but remain as an insurmountable bar to the patient's progress. For persons so circumstanced, and for that larger number who are dependent on their own efforts for a livelihood, and whose pecuniary resources cease when their strength fails, admission to an institution for the care and treatment of nervous invalids is a priceless blessing.

My closing word shall be a tribute of respect and admiration for those public benefactors who endow such asylums, and for the physicians who, in the care of the inmates, give without stint, their time, experience, and skill, at the risk of exhaustion of their own reserve of nervous power.

A CASE OF CROUPOUS PNEUMONIA OCCURRING IN A CHILD WITH SERIOUS MITRAL DISEASE. RECOVERY.¹

BY ELBRIDGE G. CUTLER, M. D.

MARY M., thirteen years of age, an inmate of an asylum for girls for some years, was sent to me in July or August, 1882, as she was rather pale and seemed delicate, with the inquiry if she were not a fit subject for a few weeks in the country. The child was rather small and thin, and her face was pale. The visible mucous membranes were a little anæmic, and after a few questions I placed my ear on the chest, expecting to hear at most an anæmic souffle. To my surprise there was a very powerful cardiac impulse with a loud systolic murmur, and on careful examination I found considerable cardiac hypertrophy resulting from disease of the mitral valve. There was a systolic murmur heard loudest at the apex of the heart, and propagated towards the scapula and distinctly audible in the back. The pulmonary second sound was accentuated, and the right side of the heart distended. The patient received small doses of iron and later digitalis, as her feet swelled a little, and went into the country for several weeks. She returned home much invigorated, and I saw little of her till about the 1st of December, when she had several pretty severe epistaxes in the night at intervals; a deep-seated cellulitis at the base of the neck on the right side, requiring incision, came on at about the same time, and rather dragged her down.

At this time, December 1st, the physical examination of the heart was as follows: There was flatness on percussion a little to the right of the sternum at the level of the third intercostal space, which at the fourth rib was one and a half fingers' breadth to the right, and below curved in a little. To the left of the sternum the flatness began at the upper part of the sternal end of the third costal cartilage and extended out in a descending line to one and a half inches beyond the left nipple on the fifth rib. The whole breadth of the heart in its greatest diameter was five and one quarter inches. The circumference of the chest at the nipples

¹ Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, April 11, 1883.

was twenty-four inches. The same systolic murmur was heard, and the pulmonic accentuation was marked. She had to be kept on one floor on account of the dyspnoea provoked by the exertion of climbing stairs. A small quantity of digitalis seemed necessary to keep up the compensation. The Sunday before Christmas the child attended church, and a few days later went to some sort of celebration in the evening. On the afternoon of the 29th of December she was seized with pain in the left side low down and in the back under the angle of the scapula, frequent cough, and at the same time there was urgent dyspnoea, apparently caused by the pain of breathing. The pain and dyspnoea increased constantly till evening, when I saw her. The temperature was then high and the pulse rapid. There was marked cyanosis, orthopnoea, every act of respiration being accompanied by a groan, and the countenance wore a terribly anxious expression. A physical examination revealed nothing further in the lungs or heart. The next day there was no material change in the symptoms, except that the pain and cough were lessened through the frequent use of ipecac and paregoric and a continued use of the digitalis. She had sat upright all night, and the dyspnoea was as great as ever. Towards night a few dry, coarse râles were heard in the middle parts of both lungs. These increased in number and extent till, on the morning of the 2d of January, 1883, they were found to have given place to the marked physical signs of consolidation throughout the lower lobe of the left lung. That is, in place of the previous universal resonance on percussion over both backs there was flatness extending from the inner end of the spine of the scapula obliquely downward and outward to the base of the chest on the left, and reaching well into the left axilla. There was bronchial breathing and bronchophony throughout this entire region, and at the end of inspiration an abundant explosion of very fine dry râles.

The only change in treatment was the ordering of a jacket flaxseed poultice to the entire chest in place of the dry heat previously used, the poultices to be as hot as could be borne and to be renewed every two hours. The symptoms of distress, which had remained stationary up to this the fourth day, continued till night, when she became a trifle easier. On the 3d of the month she was decidedly more comfortable, and could lie down a little lower in bed. In the afternoon all over the centre of the left back coarse moist râles obscured the respiration, and by the next day were heard throughout the whole of the lobe. At night on the 4th they were much diminished, cough had disappeared largely, and the expectoration, which had been hitherto almost none, was a little increased. On the 5th she had a very sore place at the lower end of the back, with considerable redness, tenderness, and swelling. An air-bed and poultices gave relief, so that on the 6th she sat up a little in a chair. Elixir of cinchona was then given. On the 9th, twelve days from the commencement of the symptoms, a physical examination made with the patient stripped showed both lungs perfectly healthy, with no vestige of inflammation. Careful percussion revealed the fact that the cardiac boundaries were not materially altered from those obtained just before the occurrence of the pneumonia.

The treatment consisted of half-teaspoonful doses of paregoric given sufficiently often to control pain and cough, wine of ipecac, small doses of digitalis three

times a day, half an ounce of brandy three or four times a day, jacket poultice, bread-and-milk diet with eggs, and, on convalescence, elixir of cinchona.

I am led to report this case first, because it is interesting to me in presenting a complication of heart disease which I had hitherto observed but once, and, second, because of the small proportion of recoveries in similar conditions where the function of the heart is so much impaired.

The pneumonia found my patient with a heart much enlarged by disease and in a condition where it seemed that the compensation had reached its maximum. On the other hand, she was somewhat reduced by several quite copious hæmorrhages and an inflammatory affection, and at the onset of the symptoms was quite pale and anæmic. To this I attribute her recovery largely, for the cyanosis and dyspnoea as it was were so great as to make me constantly entertain the idea of bleeding, and when I left her after each visit I almost expected to find her dead at the next from exhaustion.

The mortality of pneumonia complicating chronic valvular lesions in adults is high and is variously stated according to the number of cases observed. Thus Huss¹ puts the mortality at 30.4 per cent., irrespective of the presence or absence of compensation, while he found the average mortality from pneumonia to be 10.7 per cent. Fismier² found the mortality to be 77.8 per cent., but his statistics were made up from a relatively small number of cases. In 190 cases occurring in the Boston City Hospital, and reported by Dr. J. H. Borland,³ the complication was observed twice. One was fatal, and the other proving likely to be so the patient was removed by the friends.

Dr. H. C. Haven had a child with insufficiency of the mitral valve and sufficient compensation under observation some months where the pneumonic consolidation occurred over the right lower lobe, and the disease was protracted over several weeks. There were no febrile symptoms. All the physical signs of croupous pneumonia were present except sticky and rusty sputa. Resolution occurred after several weeks. Through the kindness of Dr. Haven I had an opportunity of examining the case.

Most authors unite in speaking of the protracted character of the convalescence when recovery occurs.

RECENT PROGRESS IN DISEASES OF CHILDREN.⁴

BY T. M. BOTCH, M. D.

MALARIA IN CHILDREN.⁵

OUT of one hundred and twenty-eight cases, pains in various parts of the body, and especially in the epigastrium, were complained of in one hundred and one, and in about one third of these it is stated to have been severe. The epigastric pain seemed to have no relation to the taking of food, but came on indifferently at any hour when the malarial paroxysm began, or if slight before it then became more severe. In twenty-nine cases epigastric tenderness was also present, and in some of the patients it was so acute that they could

¹ Ziemssen's Cyclopædia, vol. v., page 112.

² Ziemssen's Cyclopædia, vol. v., page 112.

³ Medical and Surgical Reports Boston City Hospital, vol. i.

⁴ Continued from page 84, vol. cviii.

⁵ American Journal of Obstetrics, February, 1883.

not bear the weight of the clothing. In almost every instance the pain was promptly relieved by antiperiodic treatment, apparently showing that its dependence on the malarial poisoning was unquestionable. Pains in the splenic and hepatic regions were occasionally complained of. Splenic tenderness was noted in one fifth of the cases, and was often acute. Hepatic tenderness was seen in a few instances, and pains in the back, extremities, and neck were occasionally observed, as was a general cutaneous hyperæsthesia, which was often acute and was noticeably relieved by cinchonidia. The condition of the spleen was recorded in seventy-nine cases; in sixty-four it was found enlarged, and in thirty-eight of these markedly so; in four cases the enlargement was doubtful, and in eleven no increase in size was discovered.

Dr. Holt states that the capsule of the spleen is less resistant than in the adult, and he found that the organ enlarged more readily and quickly in children; he also observed that it subsided quickly, and gives this as a reason for not laying much stress on the absence of splenic enlargement. He found that the spleen unless enlarged did not come in front of the middle axillary line, and that in a considerable number of cases in children the enlargement was liable to be overlooked, from the fact that it was chiefly upwards and backwards. The upper border was frequently as high as the seventh rib, and in several cases as high as the nipple, while it was found below the free border of the ribs in a very much smaller proportion; on this account palpation was of little value except in an extremely small proportion of cases. Enlargement of the liver, though often present, was less constant and marked than the changes in the spleen. Disturbances of the digestive system were almost uniformly present, and were usually pronounced. Vomiting was present in seventy-eight out of one hundred and twelve cases, occurred most frequently at the onset of the paroxysm, and in nineteen was persistent. In almost all the cases complete anorexia existed. A record of the condition of the bowels in one hundred and forty cases showed that they were regular in fifty-eight cases, and that where there was diarrhoea the children were as a rule younger than those in whom constipation existed. Regarding thoracic symptoms, there was in the simple cases nothing beyond a slight bronchial catarrh, which, however, was exceedingly common. Functional troubles connected with the genito-urinary system were noticed in fifteen cases, and of these eleven were females, and ten were patients over six years of age. Retention of urine occurred in three cases, incontinence in six, and in six the micturition was frequent and often painful. Prompt relief followed the use of antiperiodic remedies in almost every instance.

Dr. Holt divides the complications of malaria into the respiratory, the gastro-intestinal, and the nervous. Holt has himself not met with any well-marked cases of laryngeal symptoms of malarial origin, but refers to two characteristic cases reported by Bohn in the *Jahrbuch für Kinderheilkunde* for 1873.

Bronchitis was found to be the most frequent of all the complications, and again and again proved to be intractable until its malarial origin was discovered. Holt believes that in certain acute cases he has found pulmonary congestions analogous in their pathology to the congestions of the spleen and liver. He describes the symptoms as being quite uniform and character-

istic. The invasion was acute, the temperature high, from 104° F. to 106° F., the respirations very rapid, in three or four cases reaching 100 in a minute, and resembling the superficial panting breathing of lobar rather than the labored breathing of lobular pneumonia; the face was often cyanotic, and the pulse varied from 160 to 200 per minute; in one or two cases there was marked drowsiness. The physical signs were usually a slight increase of vocal fremitus, dullness on percussion, usually slight; respiration always high pitched and sometimes broncho-vesicular; resonance of the cry exaggerated, sonorous râles, and occasionally coarse and fine mucous râles; these signs were sometimes general in both lungs, but usually most marked behind and towards the apices, and were at times confined to a single lung, and once to a single lobe. When first seen they were diagnosticated as cases of pneumonia, but their subsequent progress and termination convinced Dr. Holt that they were temporary manifestations of malaria, for patients who were seen in the afternoon with the above-mentioned symptoms would be found on the following morning running about the house, with temperature, pulse, and respiration normal, and only the signs of an insignificant bronchial catarrh in the chest; the attacks would recur on the following days until quinine was administered; marked splenic enlargement was detected in these cases. Pneumonia both lobar and lobular were occasionally found as complications of the malarial fever. Spasmodic asthma of malarial origin was seen in six cases; the attacks occurred frequently, were accompanied by marked splenic enlargement, and were promptly relieved by antiperiodics.

A number of cases were observed where vomiting, or vomiting and diarrhoea, occurred periodically every day or every other day, usually accompanying a febrile attack, the symptoms during the apyrexia being slight or entirely absent; the passages were often streaked with blood and accompanied by tenesmus; the spleen was usually enlarged. These symptoms were but slightly affected by ordinary remedies, but yielded readily to antiperiodic treatment. Schmiedler reports three typical cases of this kind occurring at Breslau, in girls respectively eleven months, two and a half years, and six years old.

The derangements of the nervous system in children, depending upon malaria, are numerous. Neuralgia, though not so common as in adults, yet does occur, and the epigastric pains are often to be regarded as purely neuralgic. Schmiedler reports a case of sciatica in a child two and a half years old, recurring in paroxysms of a tertian type until quinine was administered. Motor disturbances are less frequent than the sensory. In three cases there was paresis of the lower extremities; two of these cases were accompanied by severe pains, and improved rapidly under antiperiodics until a perfect cure took place; the third case was not traced to its conclusion, but when last seen there was some improvement. Various spasmodic disorders have been observed as complications, and of especial interest was a case of torticollis in a boy eight years of age, where every afternoon at about one o'clock there was fever, and the neck became perfectly rigid and rotated to the left side; both these symptoms lasted until he went to bed, and on awaking in the morning he was well, and the neck was perfectly mobile until the time of the paroxysm; he had an enlarged spleen and other symptoms of malaria.

The paroxysms were immediately controlled by quinine and have not returned. Nephritis occurred twice as a complication. The prognosis of malaria in children was found to be good in the vast majority of cases. The acute attacks were usually readily controlled, provided that the patients could be made to take and retain quinine or some of its substitutes, which was often a matter of great difficulty. In the chronic form relapses were apt to take place unless the medicine were continued for a long time or the patient removed from the malarial district. Griesinger found relapses in sixty-four per cent. of the cases from one to ten years of age, and thirty-eight per cent. of those from twenty to thirty years. In regard to the diagnosis of malaria in children Dr. Holt considers that there are many well-marked cases in which the periodicity is wanting, and that the most important single symptom is enlargement of the spleen. From the foregoing analysis Dr. Holt draws the following conclusions:—

(1.) Malaria in early life presents symptoms peculiar to that period, and differs from the same disease in adults as widely as does pneumonia.

(2.) The classification of cases as remittent or intermittent, and the division into hot, cold, and sweating stages as in adults, leads to misapprehensions regarding the course of the disease and confusion in diagnosis.

(3.) In any acute febrile disease presenting an unusual course, the spleen should always be examined, especially in a district as malarial as New York.

(4.) In obstinate cases of diarrhoea or bronchitis not affected by ordinary remedies, especially if these symptoms show a tendency to periodicity, malaria should be investigated as a possible cause.

(5.) Spells of drowsiness and frequent attacks of epigastric pains should always excite suspicion.

(6.) In children it is even more necessary than in adults carefully to interrogate every organ before making a diagnosis where the symptoms are at all obscure.

TYPHOID FEVER IN YOUNG CHILDREN.¹

Dr. Chapin having met with several cases illustrating the difference in type between typhoid fever in early life and in adults has made a careful review of the cases which have been mentioned by previous observers, with the following results: That the cases were really typhoid seems to have been proved by autopsies made by Dr. Janeway at the Catholic Half-Orphan Asylum in New York, where a large number of cases occurred of rather an obscure character, but resembling each other closely in their symptoms, and where the post-mortem examinations showed the typical lesions of typhoid. One of the most remarkable features of the disease in children is the frequent absence of all abdominal symptoms. The bowels may be natural or not infrequently costive. Professor Janeway found that only about one in seventy cases had diarrhoea. It is difficult to locate any abdominal tenderness, as there is usually a general hyperæsthesia. Tympanites is rare. Gurgling not of much value, as it occurs also in a simple diarrhoea. The roseola is frequently absent; in the seventy cases already mentioned only eight cases showed an eruption. The nervous symptoms are not nearly so prominent as in adults. One of the most constant symptoms is a mild bronchial catarrh.

¹ American Journal of Obstetrics, July, 1888.

The spleen is at times found to be enlarged and tender, but the difficulties of ascertaining this condition in young children is so great that as a negative symptom it is of very little value. The duration of the fever varies within much wider limits than in adults. A most peculiar feature in children is that the fever after lasting several days or a week may abruptly subside, seeming to abort in a certain number of cases; only about one half of the cases go on to the full development of the disease, the fever lasting three, five, or ten days and then aborting. Probably the average duration of those cases which do not abort is from two to three weeks. It is most frequent between six and twelve years, but occurs at an earlier age, Professor Jacobi having reported a case where death took place in a new-born baby on the sixteenth day. The mortality is small. It is impossible to distinguish typhoid from malaria during the first two or three days, and it is extremely difficult to diagnosticate between typhoid fever and tuberculosis before the physical signs of the latter disease have become marked.

DIABETES INSIPIDUS.²

Senator, in speaking of the pathological appearances which occur in diabetes insipidus, remarks that the opportunities for observing them are few in number because the disease not only rarely causes death, but also because the patients, on account of the long course of the disease, seldom remain in the hospital. The most frequent changes are found in the brain; inflammatory and degenerative conditions of the fourth ventricle often occur, also tumors in that situation or in the cerebellum; these tumors are tubercular or gliosarcomas; there are also in some cases syphilitic exostoses of the skull, together with gummata of the liver. Prof. E. Hagenbach reports the following case: A girl four and a third years old, and previously healthy, began in the winter of 1879 and 1880 to be very fretful, to drink a great deal of water, and to lose her appetite; soon after she would not take anything but milk and water, and cried out for it in her sleep at night. The renal secretion was very large in amount, and there was decided emaciation. There was no history of injury; the parents were living and healthy, and there were three other healthy children. Hagenbach first saw the child December 23, 1880, after she had been in this condition for a year; she was pale and feverish, very restless and irritable. Nothing abnormal was discovered on examination of the chest. She drank a great deal of water. The specific gravity of the urine was 1004; no albumen; no sugar. December 24th she vomited. December 25th she complained of headache. December 27th there was sudden loss of consciousness, with stiffening of the limbs and a quick pulse. On the following day there was converging strabismus, twitching of the right arm and leg and the right side of the face, and great somnolence. January 2d the pupils were dilated and not reacting, the right pupil being narrower than the left. January 6th death took place without convulsions. The patient passed immense quantities of urine, which it was impossible to measure accurately, during the latter part of her life; the specific gravity varied between 1000 and 1004, and there was no sugar found at any time, although repeated examinations were made. The post mortem showed the principal changes to be cheesy tubercle of the infundibulum; meningeal tubercle and distention

² Jahrb. für Kinderheilk., Band xix., Heft 2.

of the fourth ventricle and the lateral ventricles; tubercular peribronchitis at both apices, with a few fresh miliary tubercles of the left lung; follicular ulceration of the large intestine; interstitial hepatitis; hæmorrhages in the kidney, and hæmorrhagic erosions in the stomach and duodenum.

MELITURIA FOLLOWING SCARLET FEVER.¹

Dr. Zinn, of Bamberg, reports the following case: January 27th a boy, four years of age, previously strong and healthy, and of healthy parentage, was seized with scarlet fever and diphtheria. The eruption faded on the seventh day, and the diphtheria gradually subsided. On the thirteenth day an otitis externa appeared, and stormy vomiting with rapid development of œdema and ascites, the urine now for the first time showing evidence of nephritis, being lessened in quantity, and showing a large amount of albumen and numerous casts and blood corpuscles. In a few days the more dangerous symptoms passed off, the patient being treated with hot baths and injections of pilocarpine, and a diffuse diuresis having set in the œdema and ascites quickly disappeared. Although the appetite improved considerably the little patient's strength did not return, so that he remained in bed during the whole month of March. Early in April, on attempting to walk, he was found to have paralysis of the right leg, which, however, soon passed off under the administration of iron without electricity. At this time also a slight amount of albumen appeared in the urine. The next symptom which presented itself was increased action of the heart, even noticed by the child himself. On the 10th of April the urine had a specific gravity of 1030, and a considerable amount of sugar. The amount of urine passed in twenty-four hours decreased to between 750 and 1000 cubic centimetres. The appetite was good, but not excessive; the thirst was not noticeably increased, and nothing else abnormal was discovered. The child was placed on an exclusively meat diet, with milk, eggs, and red wine, and by the end of April there was only one per cent. of sugar in the urine, and by the middle of May one fourth per cent. From this time the child improved in strength, and was allowed to have a mixed diet, and by the middle of June the urine was free from both sugar and albumen, and the patient soon became as strong and well as ever.

This case is of unusual interest, both from the rarity of its occurrence as a sequela of scarlet fever and from its unusually favorable result. Külz, in his article on diabetes mellitus in Gerhardt's *Handbuch der Kinderkrankheiten*, states that out of 111 cases of this disease only seven recovered. The same author mentions that the cause in two cases appeared to be measles, but no case is attributed to scarlet fever. Redon, in his collection of cases of diabetes,² gives, among other causes, weakness from previous diseases, such as measles, scarlet fever, typhoid, etc. Yet on looking over the original articles from which he gathers his cases scarlet fever in no instance is found to be a cause. Thomas, in Ziemssen's *Handbuch der Allgemeinen Pathologie*, Band i., s. 290, speaks of the appearance of sugar in the urine with cerebral symptoms occurring during the stage of fever in scarlet fever, but not as a sequela of that disease. In view of this case of Zinn's it would

be well during a convalescence from scarlet fever to examine the urine carefully for sugar as well as albumen where the patient does not gain in general strength as fast as he ought to.

PECULIARITIES OF AN EPIDEMIC OF MEASLES.³

Dr. J. Fewsmith makes the following abstract from Demme's article in the *Jahrbuch. für Kinderheilkunde*, Band xix., Heft 2: Out of 224 cases of measles there were thirteen deaths. Twice death was caused by the violence of the poison and the excessive fever on the second day. The duration of incubation averaged ten to twelve days, but in a few cases was only three days. There were some noticeable cases of transitory and hereditary immunity from the disease. The epidemic in Bern began at a time when there was much scarlatina present, and Demme noticed in all the cases of measles a very pronounced angina initialis, and repeatedly measles was rapidly followed by scarlet fever in the same person. A girl suffering from chorea was attacked, and a boy nine years old with obstinate prurigo; the former was freed from her chorea, and the latter from his prurigo. In some cases there was an excessively high temperature with the eruption; two cases with respective temperatures of 42.3° C. and 42.6° C. recovered, while two with temperatures of 42.7° C. and 42.9° C. proved fatal. In three cases there was no fever during the whole course of the disease, and in one case the temperature was subnormal. In four cases there was acute pericarditis, and in three cases acute endocarditis. Moreover there were some cases of glomerulo-nephritis in the desquamation stage of undoubted measles, once even with uræmic symptoms. There were two cases of complicating gangrene, one of the vulva, and one of the lower jaw, both ending in recovery.

New Instruments.

A MODIFIED URETHRAL STEEL SOUND.*

BY D. D. GILBERT, M. D.

SOME time ago Dr. Benjamin Cushing, of Dorchester, showed me some steel sounds, the stems of which he had had turned down in order that while treating a certain case of stricture he might not be embarrassed by the narrow meatus which existed.

During the treatment of the case of multiple stricture to which I have referred, I reached a point where I wanted just such an instrument, but was unable to find it. I therefore got Messrs. Codman & Shurtleff to make for me a set of sounds with the following modifications, exemplified in the following illustration, which represents at its full size the tip of a No. 25, F.

Each instrument, near the point, commenced two sizes (French scale) smaller than that marked as the size of the sound, and gradually increased to the full size about one inch from the point, when it was again gradually decreased to a wire as small as was compatible with proper firmness for the long straight staff of the instrument. Each instrument tapering through two sizes, my set was made to contain only one half the number

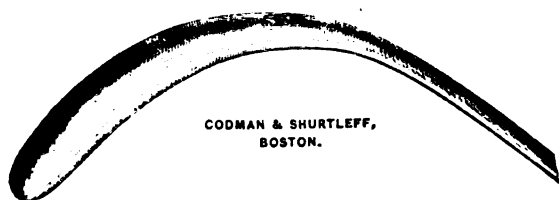
² American Journal of Obstetrics, May, 1883.

⁴ Being an abstract of a portion of a paper read before the Dorchester Medical Club.

¹ Jahrb. für Kinderheilk., Band xix., Heft 2.

² Virchow und Hirsch, Jahrb., 1877, Band ii.]

of the French scale — alternate sizes. Moreover, no size smaller than No. 9 was procured, because it would be impracticable to apply the principle to a smaller in-



strument, even if one desired a steel sound of smaller size. . . .

One who has never used such an instrument can hardly conceive the greater intelligence with which an instrument can be used when it is free except at the point where the work is being done.

Sir Henry Thompson, when praising the merits of the French flexible bougie, says the one great principle which must decide for us the question of the kind of instrument to be employed is this: "The passage of an instrument of any kind, even into the healthy urethra, must, per se, be a source of irritation. What kind of an instrument produces the least irritation?" Our own Henry J. Bigelow says that "a patient who is the subject of an old stricture, and has received the usual amount of treatment therefor, becomes a witness of no mean value as to the comfort and success of the means employed." The patient for whom I first had these instruments made, the subject of stricture during ten years, claimed for himself the same reliability which I find Dr. Bigelow has claimed for the class. This is his testimony: "I have had personal experience of most of the bougies in use, both flexible and solid, and I cannot say too much in favor of the comparative comfort of these. A person who has never had the experience can have no idea of the greater ease of the passage of these instruments over that of those which distend the urethra in all parts at the same time." Especially is this the case in multiple stricture, where, with the ordinary instrument, each stricture passed becomes an increasing obstacle to further progress, and an increasing source of suffering to the patient. On the contrary with these instruments, while the patient nerves himself to bear the pain of distention of one stricture, he knows that, as soon as it is passed, there is relief, and he can then breathe free again. And so with the operator, when one stricture is passed the instrument is no longer tightly grasped in the urethra, but will easily pass on, and he can attack the next strictured portion as unembarrassed as he did the first. In fine, what is needed for the treatment, by gradual dilatation, of stricture of the urethra, is an instrument which you can use most delicately, holding it lightly between the finger and thumb, withdrawing it or changing its direction as soon as you are able to perceive an obstruction. The hand is to be educated for the power of *delicately perceiving the characters of the passage by means of the instrument* within its grasp. This instrument without doubt fulfills these conditions far better than the ordinary bougie, either steel or solid.

In addition to what has been said on the score of comfort, etc., when used for sounding the bladder, the small staff of this instrument is free in the urethra, and the manipulations of the operator are much less embarrassed thereby.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

APRIL 11, 1883. Meeting called to order at 8.05 o'clock. DR. G. B. SHATTUCK in the chair.

SPECIMEN OF OVARIES AND UTERUS AMPUTATED AT THE CERVIX.

DR. ALBERT N. BLODGETT exhibited a pathological specimen which he had received from Dr. John Homans shortly before the meeting. It consisted of the fundus and body of the uterus, which had been amputated at the cervix. Attached to this was the left broad ligament, the left Fallopian tube, the left ovary, and a sac the size of a large orange, situated at the extremity of the broad ligament. The right ovary was also exhibited, but was detached from the other organs. The right Fallopian tube and broad ligament were not found. Upon the peritoneal surfaces of the uterus and the entire surfaces of the broad ligament were adherent remnants of partially organized blood coagula, which hung as shreddy tufts to every part of the serous surface. Upon the posterior surface of the broad ligament was a sac, the walls of which were composed of dense, shreddy coagula, but which had no present contents. The uterus was deformed, the left horn being greatly distended, forming an oblong, conical pocket, which was impervious at its upper extremity, there being complete atresia of the left Fallopian tube. The right horn of the uterus was apparently normal in size, and relatively very short. The section by which the amputation of the organ had been effected passed through the body of the uterus at a point in which the left Fallopian tube still constituted a separate cavity in the wall of the uterus, thus presenting two openings in the cut surface, one the cavity of the uterus, and the other the canal of the Fallopian tube. The wall of the uterus was very thick and dense on the right side, while on the left it was thinner, and the thickness constantly diminished toward the region of the Fallopian orifice. The tissues are now everywhere wrinkled and contracted, but the uterus is said to have been the size of a child's head at the time of the operation. The present size of its cavity from the seat of amputation to the top of the cavity in the middle line is five centimetres; from the same point to the extreme end of the cavity in the left horn is eleven centimetres. Thickness from front to back through both walls 4.5 centimetres; from side to side six centimetres. The lining of the uterine cavity is apparently normal in every respect, and is thrown into numerous minute folds. The lining membrane of the second cavity differs from the first only in respect to the more natural arrangement and condition of the glandular structures of the mucous membrane, which are, very striking in this particular specimen. Both canals are everywhere surrounded by normal uterine muscular tissue. The ovaries are of nearly equal size and about 4.5 centimetre in length by two centimetres in breadth, and 1.5 centimetres in thickness. Their surfaces are covered by shreds of coagulum, and they are softened and elongated. Upon section of the right ovary a corpus luteum is found in the stage of grayish-yellow absorption, the cavity being linear, and almost entirely

obliterated. The content was a mass of finely granular fatty detritus. No other corpora lutea were here observed. In the left ovary a number of firm, rounded bodies were felt, some of which bulged slightly above the surface, and were the size of a pea. There were also small depressed surfaces upon some parts of the mucous membrane covering the ovary. These upon being incised led to sacs of the size of a pea, which contained blood. The lining membrane was covered with columnar epithelium, the cells of which were often in a state of more or less advanced disintegration. The interstitial tissue of the ovary consisted of a loose, long, spindle-celled connective-tissue structure, soft in feeling, and easily separated. In this ovary no corpora lutea were observed. The left Fallopian tube was found, and its canal followed as far as its junction with the body of the uterus, where there was complete atresia of its lumen. The canal was pervious for a distance of eleven centimetres from the body of the uterus to its point of attachment with the before-mentioned sac contained in the broad ligament, at which situation the Fallopian tube was lost. Nothing like a fimbriated extremity could be discovered. The mucous membrane lining the tube was atrophied, and no ciliated epithelium could be observed. The sac in the broad ligament was a cavity consisting of a membrana propria, quite thick and elastic, which lay in folds, and an outer layer of peritonæum covered with fringes of organized blood coagula like adhesions. The lining of the sac was everywhere covered with a layer of pasty matter of a dull-red color, which proved to be grumous blood. Upon the posterior wall of the sac were found two distinct perforations in the lining membrane which extended through the entire thickness of the membrana propria and peritonæum, and communicated by free orifices with the abdominal cavity. Other small perforations of the lining of the sac led down to deposits of grumous blood in the tissues, varying in size from that of a shot to that of a Lima bean. Upon the peritoneal surface of the broad ligament, near the perforations, was a large mass of blood coagulum, a portion of the hæmatocele below alluded to. No connection between the sac in the broad ligament and the ovary could be discovered, and no afferent blood-vessel could be discovered.

The pathological condition, so far as this can be judged from the specimen, is the following: There was essentially a double uterus, the two Fallopian tubes being prolonged toward the cervix, so that in amputating the body of the organ two distinct canals were found. The orifice of the right tube communicated with the vagina, while there was complete atresia of the lower extremity of the left canal. The secretions of this canal had gradually accumulated so as to cause a great distention of this portion of the uterine cavity. There was a distinct sacculated cavity in the outer portion of the broad ligament, which contained a considerable amount of grumous blood, and which communicated by two separate and independent openings with the peritoneal cavity, and which had evidently given rise to the large amount of shreddy coagulum at the seat of the peritoneal openings upon the broad ligament, and formed the source of the blood found in the pelvis as an old hæmatocele at the time of the operation. Several other perforations of the membrana propria of the sac led to small, isolated hæmorrhagic deposits in the tissues beneath, after the manner of a dissecting aneurism. In some of these small sacs the

blood has the consistency of putty, in others absorption of the blood has progressed to such an extent as to leave only a small deposit of coloring matter in the part. At the seat of these perforations the interior of the large sac is lined with a firm reddish-brown layer, similar to that seen in the cavity of a true aneurism when healing by obliteration.

DR. E. G. CUTLER read a paper upon

A CASE OF CARDIAC DISEASE WITH PNEUMONIA.

He remarked that in the list of cases of heart disease in which pneumonia occurred, tabulated in Vienna, the ratio of mortality was thirty per cent. In Basel the mortality attending the same complication has been reported as seventy-seven per cent. In the City Hospital two cases are recorded, one of which died, and the other was removed by friends after life had been despaired of in the hospital, and probably also died. In the case reported the age of the patient no doubt had something to do with recovery, as children are often observed to be more tolerant of intercurrent diseases than are adults. The degree of compensation in children is also often surprisingly great. In the present case death was momentarily expected for several days in succession. Phlebotomy was thought of, but the heart was acting very well, and the uncertainty of the issue of the case and the unsatisfactory surroundings of the patient made it undesirable to bleed except as a *dernier ressource*. At present the child is pale and anæmic, but is picking up strength. During the pneumonia there was considerable cough, but no expectoration, and resolution took place without the formation of sputa. The disease commenced as a bronchitis, and was quickly followed by pneumonia of the lower left lobe. The temperature was high until the second day, but as the patient began to feel more comfortable the temperature fell to normal.

DR. T. M. ROTCH said that he had often noticed an extraordinary recuperative power in children, and has been much impressed by several recent cases. The first was that of a little girl who was carried to the hospital with œdema and deep cyanosis from valvular deficiency and dilatation of the heart. The cardiac dullness extended from the third interspace to the sixth rib, and laterally to a point two centimetres outside the mamillary line. There was a loud systolic murmur in the axillary region extending to the back. The lesion affected the mitral valve. Under the use of digitalis for a year there was marked improvement in all the symptoms. The symptoms and rational signs were now those of hypertrophy more than of dilatation. There was a much less degree of cyanosis, and œdema had entirely disappeared; there was still dyspnoea upon exertion. Now, however, after another year of treatment, the child presents absolutely no cyanosis, and experiences no dyspnoea upon exertion. She goes to school and plays like other children. The cardiac murmur has entirely disappeared, but the apex of the heart is still depressed, and the organ is somewhat enlarged. No murmur is heard in the axilla nor in the back. In children murmurs may disappear, and organic cardiac disease may be entirely recovered from, though this is never observed in adults. Dr. Rotch alluded briefly to several cases in which organic cardiac lesions had disappeared in children, leaving no trace of their existence. The following one has a most interesting history: Two years ago a boy presented himself for treatment for organic disease of the

heart with these general symptoms: the face was deeply cyanosed, the nose, cheeks, and fingers being decidedly blue. There was enlargement of the left ventricle, with a loud mitral regurgitant murmur heard at the apex, in the axilla, and in the back. There was œdema of the feet, legs, and body. Later there was complete paralysis of the left arm. Since that time the paralysis has entirely disappeared, the œdema and cyanosis are gone, and the patient is an errand boy, and may be seen running about the streets every day. The rational signs remain the same as a year ago, but the boy suffers no discomfort, and calls himself perfectly well.

HERMAPHRODITISMUS SPURIUS MASCULINUS BOVIS.

DR. F. S. BILLINGS exhibited the genital organs of a calf presenting the following very peculiar features:—

Description. External. A one year old calf, light red in color, the property of Dr. Stephen C. Martin, of Boston, who had it at his vaccine farm. Dr. Martin very kindly placed it at my disposal for examination.

Head more male than female. Horns three inches long, and haired to within one inch of their tips. The animal betrayed sexual irritability, and was inclined to be ugly.

On viewing the posterior parts, what most attracted attention was the entire want of a vulva, or anything having the external appearance of the same; directly out from the skin extended an enlarged clitoris, about six centimetres in length, with a semicircular fold of the skin embracing its lower portion. So far as I could discover there was no tendency to erection in this organ. The orificium urinæ was immediately above the clitoris, and not very distinctly visible. It admitted a No. 6 English catheter, which passed in thirteen centimetres before the urine flowed. The animal passed its urine in a spasmodic manner, and often to a distance of eight or ten feet behind it. When one felt of the skin about the clitoris a peculiar convoluted mass could be felt within it and anterior to the clitoris; of this we shall speak later.

No indications of a penis could be felt along the perineal region. No scrotum present. Raphé indistinctly to be seen. Four elongated, round bodies were to be both seen and felt in the position of the testicles, but did not depress the skin, and hung pendant when the animal was standing. Two sets of teats were visible, but no appearance of an udder. The posterior pair resembled those generally seen in bulls, were one centimetre long, and solid. The anterior were more widely separated, two and one half centimetres long, and supplied with a canal, out of which could be pressed a very slight amount of pearly colored fluid.

Internal Examination. A very careful removal of the skin revealed the entire absence of the proper tunics to the testicles, of which there were apparently two sets. The anterior, or true testicles, were five centimetres long and three thick; the supplementary testicles were four centimetres long and two and one half thick, and had a ligamentous connection with the anterior, or true testicles, in which ran blood-vessels and nerves, but no ducts; the epididymis was entirely wanting in this pair, while present by the anterior ones. By the supplementary testicles two ducts, ten centimetres long, were to be seen, one from each, extending sub-pelvic to the penis, or what answered to it, and entering the convoluted mass previously mentioned. A very thin serous membrane covered these organs. On cutting

them open they presented a smooth surface, not spongy, of a peculiar ashen color with whitish striæ running from the centre of the body to the periphery, and a markedly developed corpus lligmori. It was at first thought that these organs might be ovaries, but the appearance of the corpus, as well as the entire absence of every ovarian characteristic, leads me to consider them as rudimentary testicles, notwithstanding the fact that the parenchyma had very little macroscopical resemblance to that of the normal testicle, as well as the want of an epididymis.

The anterior pair of testicles had all the attributes of normal save the embracing tunics; they hung free in a mass of loose connective tissue, from which the cords were easily loosened to the inguinal ring toward which they may be seen extending. The cremaster was well developed. The epididymis was well developed, and the seminal ducts could be traced along the funiculus until they entered the ring. Cross section of these organs gave a parenchyma having the peculiar dark orange yellow customarily seen in the bull; it was spongy and swelled up beyond the level of the thin albuginea. A microscopic examination gave evidence of its true nature, but the cells were all very immature, mostly round and epithelial, and nowhere could I find any traces of spermatozoa. The length of the cords was twenty-four centimetres.

The pelvic conditions were made visible by separation of the arch. Here we saw a very small and exceedingly thick and muscular bladder. The spermatic ducts were seen to enter a bicornated body which at first seemed to be the normal ampullæ, but more exact examination led to the determination that it was a rudimentary uterus. The horns of this organ were about three inches long, the body, or neck, about two. The horns had quite a distinct lumen which united in the body, ending blindly. This uteroid body was immediately above the bladder, and ended bluntly above the penis, where it was intimately connected with it.

The penis. Here we found a singular phenomenon. The urethra did not run *through* the penis, that is, its posterior part, but consisted of a thin-walled canal united to it by loose connective tissue and lying upon it, entering it at the pars cavernosa. From the pars cavernosa with its peculiarly powerful accelerator urinæ (in the bull) to the clitoral termination were to be seen two convoluted masses. It should be here mentioned that in the normal penis of the bull, immediately posterior to the scrotum, there is a sigmoid curvature provided with retractor muscles which are attached to the ischium. We have previously spoken of a convoluted mass to be felt anterior to the clitoris; this proved to be one sigmoid curvature having some resemblance to the normal; about two inches anterior to this was to be seen another convolute coiled, not lengthwise, but composed of three and one half coils, one above another, like a coil of rope. There was no urethra through this portion, which was about ten centimetres.

The only part of the penis which bore any resemblance to normality was the pars cavernosa, about three centimetres long. On opening it the presence of the numerous glandular ostia was made apparent by their entire absence. The caput gallinaginis was very well developed with its peculiar trident-like extensions to be seen in the bull, but there was no evidence of ostia for the seminal ducts. Cowper's gland present. Seminal vesicles wanting. Prostate wanting.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDÉ, M. D., RECORDER.

THURSDAY EVENING, June 28th. The President, Dr. TYSON, in the chair.

A SPECIMEN OF RENAL CALCULUS, OXALATE OF LIME.

By J. A. MUSSER, M. D.

A. R., aged thirty-two, a stone-cutter, residing one year in Philadelphia, applied to me for treatment June 5th, bringing with him a sample of his urine. It was bloody, and had been voided without pain during the twenty-four hours prior to this visit. Three months ago, without any cause, he was seized with pain in the left loin. The pain increased in severity, kept him from work, caused faintness, but no nausea or vomiting, did not radiate in any direction save transversely to a slight extent, lasted three days, and was not followed by hæmorrhage. In the intervening three months he was in good health. A jar of the body or any movement did not increase the pain. It may be noted, but is rather irrelevant, that for ten or more years he has always had a weak back, becoming painful when stooping.

Twelve hours after the consultation the same localized pain recurred and continued for twenty-four hours. Suddenly it was relieved, and the subsequent urinary discharges were clear. In three days he had a return of the pain and hæmorrhage simultaneously. The pain increased in severity, and at the height of the paroxysm extended to the testicle and the head of the penis. The paroxysm was relieved by the passage of the calculus I show you by the urethra. The passage of the stone through the ureter was characterized by the most agonizing pain and frequent attempts to urinate.

Microscopical examination of the first sample of urine showed the red color due to blood. A similar examination of his clear urine, as well as the bloody, proved the presence of urate of soda and crystals of the phosphates. The urine was acid.

The diagnosis of renal calculus was not difficult, but the microscopical appearances of the urine led me to infer that the stone was composed of uric acid. With such idea the patient was put on alkaline treatment. The sequelæ proved that the solvent effect of such treatment was of no avail save from the diuretic action of the drugs. Morphia was given to relieve pain.

A portion only of the stone was received, an angular portion having been broken off by the patient. The portion weighs .06 gramme. The exterior is tuberculated; the interior dark in color, bluish; the exterior lamina light-brown. It is exceedingly hard. Chemical examination was made by Dr. Leffman, who reported it to be an oxalate of lime calculus.

HÆMATOMA IN THE UPPER PORTION OF THE MEDIASTENUM PRODUCING DEATH BY SUFFOCATION.

DR. J. T. ESKRIDGE said that he obtained the specimen from a colored man, porter, aged thirty-two years. He had led an irregular life, but it was not positive that he had ever contracted syphilis. During the past winter he suffered from a severe cold on the chest, and was told by his physician that his heart was inflamed. With the exception of slight cough, unattended by any difficulty in breathing, he had considered himself in excellent health, when, on June 10, 1883, after carrying a heavy trunk on his shoulder from the first to the

fourth floor of a hotel at Cape May, he was seized immediately with great difficulty in breathing, and was compelled to seek the open window to prevent suffocation. During the next two days, while still remaining at the sea-shore, he suffered from several attacks of shortness of breath, each lasting from several minutes to an hour or more.

He was admitted to the hospital of the Jefferson Medical College on the evening of June 12th, about sixty hours after the occurrence of the accident. On admission his breathing was so labored that he was unable to speak. He was gasping for breath, and bathed in profuse cold perspiration. Respiration 36, with greatly prolonged expiration; pulse 100; temperature 99.7° F. Inhalations of amyl nitrite and the hypodermic use of morphia and brandy seemed to give relief. The attack lasted about twenty-five minutes. He slept well during the night, and was tolerably comfortable until five P. M. the next day, when he had another paroxysm, which was promptly checked by amyl nitrate, morphia, and dry cups to the chest.

June 14th, A. M. Dr. Eskridge saw him for the first time. The patient was breathing quietly, and said that he felt comfortable. Pulse and temperature were nearly normal. Urine contained neither albumen nor sugar. No cardiac murmur was detected. Lungs were hyper-resonant at their apices. Loud, moist, bronchial râles were present throughout both lungs. In view of the man's former freedom from attacks of dyspnoea he thought that he detected nothing capable of giving rise to so great interference with respiration. The next two days no dyspnoic attacks occurred, and he seemed to be doing well.

June 17th. His breathing was distressing for several hours. Nothing seemed to afford much relief.

June 18th. Severe asthmatic breathing came on at six A. M., and lasted in its worst form about six hours. Chloral hydrate gave some relief. After that paroxysm his breathing did not again become quiet. He died exhausted at seven P. M. the next day. With the exception of occasional headache he did not complain of pain at any time.

Section cadaveris was made by Dr. Parrott, the medical resident, the pathologist of the hospital and Dr. Eskridge being absent from the city at the time.

Thorax. Pericardial sac was completely obliterated by old, firm adhesions between the pericardium and heart. The heart was rather soft, and both ventricles were relaxed, and contained considerable dark fluid blood. Valves nearly normal. Both pleuræ were adherent to the upper portion of the pericardium, and the left pleura was everywhere adherent to the lung. Both lungs were emphysematous at their apices, and considerable lobular emphysema existed. Bronchial tubes were congested, and contained considerable mucus. A semi-solid or rather soft oblong body, about two inches long by one and a half wide, was found lying upon the lower anterior surface of the trachea, imbedded in connective tissue, and firmly held by old adhesions. It occupied a position just above and behind the transverse portion of the arch of the thoracic aorta. Three of the rings of the trachea in the position where greatest pressure was exerted by the semi-solid mass presented a dark color, and one of the spaces between the discolored tracheal rings was nearly ulcerated through from the effects of pressure. On cutting into the tumor it was found to consist of blood more or less clotted. The calibre of the trachea was

greatly lessened at the seat of hæmorrhage. No ruptured blood-vessels were found. No disease was observed in any of the arteries. Abdominal organs were nearly healthy in appearance.

Dr. Eskridge, in his remarks on the case, said numerous cases of rupture of the aorta or of smaller blood-vessels into the trachea, bronchi, œsophagus, or mediastinum, were on record, but in all of them, so far as his knowledge went, death resulted directly from loss of blood. The peculiarity of the case of which he had given a description was the formation of a hæmatoma in the mediastinum. In hæmorrhages into that space the blood usually gravitated to the lower portion of the chest, and the patient soon died from loss of blood. In the case he presented, however, on account of extensive old and firm adhesions of pleuræ, pericardium, connective tissue, and everything else in the upper portion of the mediastinum, a hæmorrhage in that situation must necessarily have been circumscribed, and could have taken place only gradually by dissecting up the adhesions. He thought that the condition of the parts that prevented an extensive hæmorrhage predisposed the smaller blood-vessels, especially the veins of that locality, to rupture. In view of the extensive alterations by means of general adhesions that had taken place at the seat of hæmorrhage, it was not surprising that rupture of a blood-vessel should have occurred when the parts in the anterior region of the neck and upper portion of the chest were suddenly put upon the stretch, as occurred in the act of raising a heavy trunk from the floor and placing it upon the shoulder. From the specimen, as he obtained it, he was unable to say whether the hæmorrhage had occurred from a rupture of the aorta or one of the smaller vessels, or from the bursting of a very small vessel that had become aneurismal. The tearing across of small veins would have been sufficient to give rise to the extravasated blood.

CONGENITAL FATTY TUMOR BENEATH OCCIPITO-FRONTAL MUSCLE.

Presented by DR. NANCREDE.

The tumor was simply presented on account of the rarity of such growths of *foetal origin*. The patient was a child aged sixteen months. The growth was noticed at three weeks, and in consequence must have been of foetal origin as it then was of the size of a bean. It presented none of the symptoms of a fatty tumor except a faint lobulation, the skin moving freely over it, and presenting none of the dimpling so common in lipomata. Its site was peculiar for a dermoid cyst, namely, over the right occipito-parietal region, yet its resemblance was so close that by exclusion it was considered to be a congenital cyst. Upon removal it was seen to be beneath the aponeurosis of the occipito-frontal muscle. Microscopic sections, kindly made with the freezing microtome by Dr. N. G. MacConnell, showed that the growth was a pure lipoma.

ADENOMATOUS GROWTH, APPARENTLY RECURRENT, IN REALITY AN OUTLYING PORTION OF THE MAMMA NOT REMOVED AT A PREVIOUS OPERATION.

Presented by DR. NANCREDE.

The above title really gives the essential points in the history of a patient, aged twenty-three years, upon whom two operations had been performed for a supposed fibroma (adeno-fibroma?) of the breast, which recurring after partial removal of the breast, the whole

organ, it was supposed, had been then removed by another surgeon. Dr. Nancrede had opposed all operation at first, considering the breast was really not the seat of anything beyond a local induration after injury. He had removed the third growth, which, from its history and microscopic appearances, he was satisfied was the result of the irritating drag of the badly-placed cicatrix on a small portion of breast tissue left at the second operation. The clinical lesson taught by this case was clear, namely, the freest possible removal of mammary growths.

Recent Literature.

The Medical and Surgical History of the War of the Rebellion. Part III. Vol. II. Surgical History.

This volume, the completion of which its distinguished author, Surgeon George A. Otis, did not live to see, ends the *Surgical History of the War*.

Its every page attests Dr. Otis's untiring industry and zeal, and it will ever remain a worthy monument to him and to American surgery.

After his death the labor of authorship fell upon the shoulders of Surgeon D. L. Huntington, who, carrying out the plan of his predecessor, has maintained the high character of the work for accuracy and completeness.

The period which has elapsed since the war and the records of the Pension Office have enabled the author to follow up many cases, and thus with accurate knowledge of the final results to estimate the value of different methods of treatment in a manner which adds greatly to the worth of the deductions drawn from the statistics.

The importance of the work as a book of reference is much increased by extensive notes from previous authors, and in many instances complete statistics of all known cases of certain injuries or operations are given for comparison.

In this connection it is interesting to notice how favorably the statistics of success in the civil war compare with those of other armies operating in more settled countries, and possessing from the first a trained medical staff and complete outfit.

The present volume comprises Chapter X., Wounds and Injuries of the Lower Extremities; Chapter XI., Miscellaneous Injuries; Chapter XII., Wounds and Complications; Chapter XIII., Anæsthetics; Chapter XIV., The Medical Staff and *Materia Chirurgica*; Chapter XV., Transportation of the Wounded. Chapter X. begins with the consideration of flesh wounds, and includes a careful account of the cases of wounded blood-vessels and their treatment.

The mortality after ligation of the external iliac artery is found to be twice as great in military as in civil practice.

In a series of 127 ligations of the femoral artery for injuries not attended by fracture the mortality rate was 71.7 per cent. Two successful and four fatal cases of ligation of the profunda are reported.

The popliteal and posterior tibial arteries were each tied in seventeen cases, and in each series the mortality rate was 76.5 per cent. Seven out of ten cases recovered after ligation of the anterior tibial.

In twenty-eight cases amputation was practiced for uncontrollable hæmorrhage with a mortality rate of seventy-five per cent. Twenty-six of these amputations were through the thigh.

Attention is called to the importance of tying above and below the point of hæmorrhage in injuries of an arterial trunk.

The discussion of gunshot fractures of the hip-joint is of the greatest interest. At first sight the results of conservative treatment of these injuries seem most encouraging, but the author by a very rigid examination of these cases shows that probably many of them reported as injuries of the hip-joint were in reality extra-articular and he thus modifies the statistics so that conservatism appears less life-saving than either amputation or excision. The approximate mortality rate which he finally adopts is for conservatism, 98.8 per cent.; for excision 90.9 per cent.; for amputation, 83.3 per cent. Probably, however, some of the successful cases treated conservatively, and rejected from the table on account of uncertainty as to the exact nature of the injury were in reality hip-joint fractures and should count to the credit of this method of treatment, and of the cases treated by operation the successes are probably all reported, while a certain number of unsuccessful operations were doubtless not returned by the operating surgeons.

The following rule is laid down for the treatment of shot wounds of the hip-joint: "Expectant treatment is to be condemned in all cases in which the diagnosis of direct injury to the articulation can be clearly established; primary excisions of the head or upper extremity of the femur should be performed in all uncomplicated cases of shot fracture of the head or neck; intermediary excisions are indicated in similar cases where the diagnosis is not made out till late; secondary excisions are demanded by caries of the head of the femur or secondary involvement of the joint; amputation should be performed: 1. When the thigh is torn off, or the upper extremity of the femur comminuted with great laceration of the soft parts, in such proximity to the trunk that amputation in the continuity is impracticable. 2. When a fracture of the head, neck, or trochanters of the femur is complicated with a wound of the femoral vessels. 3. When a gunshot fracture involving the hip-joint is complicated by a severe compound fracture of the limb lower down, or by a wound of the knee-joint." Next in order come shot fractures of the shaft of the femur.

Nine thousand, eight hundred and seventy-one cases are recorded with the following results: 3467 cases treated conservatively with a mortality rate of 49.9 per cent.; 6229 cases treated by amputation with a mortality rate of 53.8 per cent.; 175 cases treated by excision of portions of the shaft with a mortality rate of 69.4.

To arrive at a fair conclusion as to the comparative merits of conservatism and amputation, primary amputations alone should be considered. The mortality rate for these was 49.8 per cent.; slightly better than after conservatism. Considering that the severe cases were amputated, and the attempts at conservatism made in injuries of less severity, the advantage in point of safety is probably even somewhat greater in favor of amputation. In military surgery the necessity of transportation with imperfect apparatus must decide many cases for amputation in which conservatism could otherwise be properly tried.

With all the difficulties in the way of carrying out the conservative treatment it was found more life-saving in fractures of the upper third of the thigh than high amputation, which was almost uniformly fatal.

The results of fifty-four excisions of the knee for gunshot injury go to confirm the almost universal opinion that this operation should be discarded from military surgery. The mortality rate after it was 81.4 per cent. against 53.8 per cent., the rate of mortality after amputations in the lower third of the femur.

In shot fractures of the lower leg conservatism was triumphant over other methods, partly due no doubt to the fact that the less severe injuries are all credited to it. The mortality rates are as follows:—

In cases treated conservatively	13.8 per cent.
In amputations at upper third	27 per cent.
In amputations at middle third	20.6 per cent.
In amputations at lower third	27.6 per cent.

In excisions of portions of the bones of the leg the mortality was much larger than after the conservative treatment of similar injuries, and the limbs obtained were often very useless.

The treatment of shot fractures of the ankle by conservatism and by excision proved unsatisfactory.

The feet saved by both of these methods were often worse than useless. After excision the mortality rate was twenty-nine per cent.; after conservatism 19.5 per cent. It is, however, to be remembered that the conservative method was adopted in injuries of less severity, and that failures generally came to amputation before a fatal issue.

In amputation at the ankle Syme's method with mortality rate of 25.6 was preferred to Pirogoff's with mortality rate at 28.5 per cent. The stump left by Syme's operation was found better adapted to an artificial foot than that after Pirogoff's. After Pirogoff's operation reamputation was required in 16.3 per cent. of the cases after Syme's in 24 per cent.

In Chapter XII. is an interesting section upon military projectiles and their effects upon the various tissues. The accidental diseases of wounds, too, are treated in this chapter, and the matter upon hospital gangrene is of especial interest. But it would reach beyond the proper limits of a review to even indicate the various directions which these investigations have taken.

The above summary gives some idea of the ground covered, but the thoroughness and comprehensiveness of the researches can only be appreciated after the careful study which they deserve. The appearance and value of the work are much increased by numerous excellent illustrations. America may justly be proud of this contribution, which rightly takes a leading place in surgical literature, and which should convince a doubting Congress that a service capable of such work is worthy of generous appropriations.

A. T. C.

— A special dispatch to the *Boston Advertiser* says: P. J. Sheahy, who served as one of the jurors in the Guiteau trial, has become insane, and will be conveyed to an asylum. His insanity has been gradually developing ever since the hanging of Guiteau, which event seemed to have a powerful effect on a mind that before that time never showed the slightest symptom of weakness. Before the trial he frequently expressed the greatest repugnance to serving on a jury that was to try a man for his life, and after the trial he became morbid on the subject of being in part responsible for a hanging.

Medical and Surgical Journal

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THE BRITISH ARMY HOSPITAL SERVICES INQUIRY COMMITTEE.

WE gave last week some of the facts in regard to the medical services during the Egyptian expedition, which were intended to serve as an introduction to a short discussion of the evidence before the Committee of Inquiry on the Hospital Service. Our account of the medical service of the campaign was necessarily as brief as it could well be made. Our account of the testimony must be confined to those points which seem the most important and the most striking.

Much of the interest of the inquiry to an outsider naturally centres in the opinion of Lord Wolseley, commanding general of the forces engaged in the expedition.

In regard to the hospital at Ismailia he stated to the committee that he was immensely disappointed with its condition, and thought it very discreditable. Visited it on the 27th. "The hospital was already full; men were lying on the floor on blankets." He referred to the absence of mosquito curtains, and the quantities of flies, and the deficiency of hospital attendants, and pronounced the bread unfit for human food. "Suitable provisions might have been obtained in the bazaars if the medical officers had taken the initiative."

"If there had been a military officer in that place looking after the sick and wounded I am quite convinced that he, having the sympathies of a soldier, and knowing the soldiers, would never have allowed those men to be given that bread. What I wish to say is that I think the presence of a military officer in the Ismailia hospital would have gone far to correct what was wrong."

"The medical men worked as well according to their lights as any officers in the army. The Army Hospital Corps men are very bad nurses. They do not take the same care of the men as the regimental orderlies did. There is a laxity of discipline in the Army Hospital Corps, owing to their being under men who do not know how to look after the men."

"The system of giving medical officers the command of the Army Hospital Corps should be altered. A separate officer should look after the discipline in hospitals."

"There were a great number of cases, I almost think mounting to hundreds, of men who were sent away from Egypt who ought never to have left it. I think that the Medical Department at that time were begin-

ning to feel a little frightened about what had taken place. The hospitals were in such bad order that they got rid of their patients by putting them on board ship, and sending them to England. I think in many instances men were sent off who would have been well in a few days if they had had anything like a good hospital to go to at Ismailia where they could have been fed well and looked after for two or three days, and would have been quite fit to go to work again."

These striking views, taken from his evidence, which covers many pages in the report, have naturally excited some indignation among medical men, who believe his testimony to be unjust, and as representing what he thinks now he ought to have said rather than what he did say at the time of his visit to the hospital at Ismailia. At least in considering his testimony before the committee one must take into consideration his telegram dated the 30th of September: "The Medical Department is working to my entire satisfaction."

In opposition let us hear the testimony of Lieutenant-General Sir John Adye, chief of staff, who visited the hospital on the 25th or 26th:—

"I gave Doctor Stanbury every assistance in landing that was required, but military considerations overrode every other, and the port of Ismailia was blocked by the landing of men, horses, guns, carriages, munitions, and stores. The stress was very great because we had to fight battles at a distance in the desert before we could land the bulk of our troops; but even on the 25th, when I visited the hospital, the wounded were all in bed and surgical operations were being conducted; and I thought a great deal had been done in the way of arrangements, considering that this was an empty building without a chair or a table or a bed in it when I went there on the 22d."

Lieutenant-Colonel Butler, assistant adjutant-general, headquarter staff, said: "The bread was generally condemned, but it was no use condemning it, because the supply of bread was totally inadequate to meet the requirements of the army." "There was bread as well as other things to be got in the market," but "the whole of what there was there was cleared out after an hour."

The flour sent out from England was found to be spoilt, and time was required to replace it. The hospitals were furnished with an abundance of biscuit.

Lord Wolseley put great stress upon the absence of veils and mosquito nets. Mr. Edward Cant-Wall, correspondent of the *Times*, speaking of the hospital at Kassassin, was asked if he saw cradles with nets over them over the men's heads, replied that he did not see them. "But these veils were rather a nuisance than otherwise; they raised the temperature twenty degrees directly they were on, and they must have worried the men more than the flies."

Sir William MacCormac served as a non-official member of the committee, and has appended a series of remarks to their report, giving his personal views upon the Egyptian campaign. He compares the care of the English troops with his own experience in the Anglo-American ambulance at Sedan during the Fran-

co-German war. "When I look back on the six weeks I spent as surgeon-in-chief of that field hospital in Sedan and compare it with the accounts of the manner the sick and wounded were cared for during the recent campaign, I cannot but express astonishment at the character of some of the complaints which have been made against our medical service."

"We were very short handed," at Sedan, "for the great number of wounded suddenly poured in upon us. For a few days we had only horse-flesh to eat, and our bread wholly ran out, although we got every loaf the town bakers could give us. We had other hardships to endure, but no one thought of complaining. Far from it, we were overwhelmed with expressions of gratitude both from officers and men. They saw we were trying to do our best for them."

He refers to the dreaded "Egyptian ophthalmia," which during the Egyptian campaign in the early part of the century was the most formidable disease in the army, the plague only excepted. Of the Indian contingent in that campaign fifty became blind, while the French are said to have sent home one thousand blind men from Egypt. In the present campaign not a single man lost his eyesight, though there were 1494 cases of inflammatory affections of the eyes admitted to the hospital.

The following quotation from Mr. McCormack's remarks seem to cover the whole ground:—

"There were doubtless considerable inconvenience, some privation, some hardship; but inconvenience and hardship are things which may be fairly regarded as inevitable in time of war, and doubly so in a war which was pushed forward with such exceptionable rapidity,—where a base had first to be seized and the transport was dependent on the captured lines of rail and canal, and when all other considerations were made subservient to speedy success. Of course this was rightly so, for rapidity, though it may entail individual discomfort and even hardship, saves in the end the greater number of lives."

"In my opinion the medical officers engaged in the recent campaign displayed the most self-denying devotion to the sick and wounded. The duties and responsibilities imposed on them probably exceeded those of any other branch of the service, and the duties were most ably carried out under very trying circumstances, and in a manner which, if we may judge by accomplished results, could scarcely have been better."

It is impossible in any space which it is proper to devote to the subject to consider all the different phases of the inquiry, or even to mention the recommendation of the committee. Certain unforeseen difficulties are sure to arise in any military expedition, and no man can go to war and carry all the comforts and safeguards of a peaceful community with him. One reason of the outcry was the very shortness of the campaign. There was no opportunity to weed out incompetent men, or to improve on deficiencies which actual service is sure to discover.

In the discussion in Parliament on going into committee on the Wolseley Grant Bill Dr. Cameron offered a spirited vindication of the Army Medical

Department from the charges brought against them by Lord Wolseley, and drew from Lord Hartington, the Secretary of State for War, the admissions that he regretted some of the evidence given by Lord Wolseley before Lord Morley's Committee, that in his opinion the Medical Department did not deserve the blame which had been cast upon them, for there was no break-down, and the service was in process of rapid improvement when the war closed.

The medical corps of the British army may be said to be yet in a transition state. In 1873 the regimental system was abolished by which medical officers were looked upon as belonging simply to the regiment, and the unification or corps system was introduced, but among certain of the household troops the regimental system is still retained. In 1876 the rule was introduced that medical officers should enter the army for ten years only, a proviso which left the service absolutely without candidates for some years, and seriously crippled its usefulness, and even to-day the status of the medical men seems not entirely settled, as General Wolseley in his testimony refused to consider the surgeon-general of the expedition a part of his staff.

It is evident that both the commander-in-chief of the army and the adjutant-general, Lord Wolseley, hesitate to give to army surgeons full control of military hospitals; that the older officers look back with regret upon the pleasanter features of the regimental system, and that the present system is not yet perfect in all details; that the medical men themselves are not fully satisfied with their own position, if we may trust a little pamphlet recently issued by one of their own number, and that wounded officers in field hospitals are not at all inclined to submit to regulations which put them for the time being on an equality with privates in the matter of rations. This latter regulation would evidently have a very different effect upon an army officered as the British army is to a volunteer army fighting for a purpose like our own in the Civil War, or one raised by general conscription. The officer waiting impatiently till the surgeon had attended to a case of secondary hæmorrhage to find whether the attendant was to furnish the brandy of his own prescribing, and the other who allowed his servant to put on one side the kettle in which was cooking the broth for a whole ward, in order that he might have the little dish of his own desire, remind us forcibly—by contrast—of Sir Philip Sidney's cup of water and the dying soldier. Are these examples of the sympathies of a soldier mentioned by Sir Garnet?

The wisdom of giving the surgeons complete control of the general hospitals was abundantly shown during our own war, and is fully recognized in the recommendations of the committee.

We have reason to believe that the reaction from unjust criticism has already begun, and that Lord Wolseley himself desires to discriminate more carefully in his criticisms, as the following item from the *Lancet* of July 7th seems to show:—

"At the distribution of prizes at the Charing-Cross Medical School Lord Wolseley, referring to his past services, acknowledged in warm terms the obligations

he had been under in all his campaigns to the medical officers of the army for the zealous and efficient manner in which they had invariably discharged their important and arduous duties. The medical, like every other department of the army, was affected by the progress made by science, and could not afford to stand still. But while he desired to see some reforms made in it, he must say that no body of officers ever did their duty more zealously than the medical. After the battle of Tel el Kebir the wounded were removed and attended to more promptly than, so far as he knew, had ever occurred before, and while he might have fault to find with some parts of the system he had none to find with the individual officers, whose labors were arduous and very successful.

SANITATION AT NEWPORT.

OUR readers will perhaps remember that an association, composed chiefly of the summer residents of Newport, and known as the Sanitary Protection Association, has been in operation for some time, its object being to afford its members the benefit of the best sanitary counsel, both at the time of building new houses and by inspection from year to year, to guard against defects, and to keep householders informed of valuable improvements which may become known to science. The annual report of this society for the year 1882-1883 by its Secretary, Dr. William C. Rives, Jr., has reached us, presenting a sketch of its work during the year. The JOURNAL has previously alluded to the controversy between this society and the local municipal authorities, the latter claiming that the health of the city was all that could be desired, and that the work of the Association was superfluous if not impertinent. A case of cholera last September, though not of the epidemic variety, called attention to the unsanitary condition of a portion of the town, and the President of the National Board of Health, after examining the case, sided with the Association in its effort to get municipal support for a scientific sanitary supervision. The past year has witnessed a growth of public sentiment in this direction, and we are told that at a recent meeting of the city council a committee was appointed to act in the matter of establishing a special board of health, in the constitution of which it is hoped the Sanitary Association will have a voice.

The long-expected report of the house-to-house survey of Newport, made in the winter of 1881-1882 for the National Board of Health at the instance of this Association, which had been awaited with great interest as being likely to give a correct picture of the condition of the city, was read before the members at a special meeting held in November. The result of this survey, which was carried out in great detail, showed conclusively the bad condition of a large number of premises, and most of the wells in the city proper, refuting completely the statement of those who claim that the condition of the city leaves little to be desired. In the face of these facts the argument that

the death-rate on the whole is low compared with that of many other cities seems very weak. For it is held by experts that Newport has natural advantages which ought to make it an unusually healthy place, and it is reasonable to suppose that with the doing away of sewers discharging above the tide level and the watering of streets with salt water so taken as to be contaminated with sewage and other nuisances, not only will the zymotic diseases diminish, but that inconveniences and the minor ailments (which statistics do not cover) will be sensibly alleviated. The members of the Association think that, contributing largely as they do to the tax roll of the city, they have a right to a hearing in matters which so deeply concern them.

THE PARKMAN PROFESSORSHIP OF ANATOMY IN THE HARVARD MEDICAL SCHOOL.

THE appointment of Thomas Dwight, M. D., as Parkman Professor of Anatomy in the Medical School of Harvard University has lately been announced. Dr. Dwight, as is well known, succeeds Dr. Oliver Wendell Holmes, who resigned nearly a year since, having himself succeeded Dr. Dwight's grandfather, the late Dr. John C. Warren, some thirty-five years ago.

Dr. Dwight has been discharging the duties of his office during the past winter, and brings thereto a ripe experience both as student and teacher of anatomy and of kindred subjects. We think it may be said that he owes his appointment to the fact that he was considered to possess the most thorough knowledge of the subjects he will be called upon to teach of any of our fellow countrymen under middle life whose names were brought to the consideration of the government of the university.

He was for several years Professor of Anatomy in the Bowdoin Medical School, and has been for even longer Instructor in Topographical Anatomy and Histology in the Harvard Medical School. He is the author of *The Anatomy of the Head*, *Identification of the Human Skeleton*, *Frozen Sections of a Child*, and of a number of scattered papers, among which we may mention *Description of the Balneoptera Musculus*, *Structure and Action of Striated Muscular Fibre*, *The Action of the Intercostal Muscles*.

Dr. Dwight received the degree of A. B. from Harvard in 1866, and of M. D. in 1867, is a member of various medical and scientific societies, and was formerly surgeon to the Carney Hospital and to outpatients at the Boston City Hospital. He was for a number of years one of the editors of this Journal, and continues, after eleven years' valued service in that capacity, its reporter upon Progress in the Science of Anatomy.

Our best wishes accompany our predecessor and colleague in the discharge of the new and honorable responsibilities which he is called upon to assume.

— We understand that Dr. Calvin Ellis has resigned the position of Dean of the Harvard Medical School, and Dr. H. P. Bowditch has been elected his successor.

TELEGRAPHY AND HEALTH.

THE conspicuous position in which telegraphers have been placed by the present strike has served, among other things, to call attention to the great demands made by that calling upon the nervous system of those who follow it. The first-class operators all read by sound, and in a large office where a hundred or more receivers are all buzzing at once, the strain upon the organ of hearing as well as upon the cerebral centre of audition, protracted as it is through ten hours daily, is very great. Of course, in this as in every other occupation, it is true to a certain extent that "custom makes it a thing of easiness," yet to discriminate between the longer and shorter dashes in an instrument clicking at the rate of a very large number of words per minute involves, none the less, a very close exercise of the attention even when it is done only for the regular working hours of the day, while those operators who have been obliged since the strike to work double time have been excessively exhausted. The nervous and muscular energy expended by a rapid sender is perhaps still greater. It is on the whole surprising that "writer's cramp" is not more frequent than it is among telegraphers.

It is said that few operators are good for much after the age of thirty-five years.

MEDICAL NOTES.

— Dr. John C. Dalton, the eminent physiologist, has resigned his chair in the College of Physicians and Surgeons of New York. His successor is Dr. John G. Curtis, who for a number of years has been the assistant professor.

— Dr. Theophilus Parvin has been called from the professorship of Obstetrics in the University of Louisville, which he had held for a few months, to the chair of Midwifery in Jefferson Medical College. His successor at Louisville is to be Dr. John A. Ochterlony.

— We have received the seventh bound volume of the *Sanitary Engineer*, a journal whose weekly visits are always prized for the valuable information which it always contains in its special department.

— The present attitude of Mr. Lister in regard to the spray may be learned from a communication to the *Medical Press and Circular*, April 25th. He says: "I have not given up the use of the spray, although I certainly regard it as the least important part of our antiseptic arrangements. Whatever other good it may do it is a very mild form of antiseptic irrigation, and tends to keep the *entourage* of the wound, including the surgeon's hands and instruments, pure. But if I had not a spray-producer at hand I should not on that account omit other elements of antiseptic treatment. I still use the spray in changing dressings so long as the wound is not merely superficial. But far more important than using the spray is it to make a point of covering the wound with some pure aseptic material before beginning to wash the parts which were covered with the edge of the dressing only, and were, therefore, impure. In

other words, I believe one of the commonest causes of failure is dabbling alternately the impure surrounding parts and the pure wound with the same piece of rag, which, though moistened with carbolic lotion, cannot work miracles."

— A gallant Irish practitioner, taking up the cudgels for the ladies, says he can see no earthly reason why women should not be allowed to become medical men.

NEW YORK.

— Secretary Folger has communicated to the New York Emigrant Commissioners his opinion that their powers in the matter of preventing imported paupers, of whom so many have recently been received at this port, from remaining in the country are practically unlimited. The principal steamer companies, it is said, have accepted this view, and have promised to take back all persons brought over by their vessels who may be adjudged by the commissioners to be paupers.

— Dr. R. Osgood Mason having witnessed the drowning of a man from a ferry-boat on which he was a passenger (the man was picked up by another boat) thus comments on the treatment that he received: "This case certainly affords food for thought concerning the methods employed for resuscitating people rescued from the water. Here was a man, apparently in the prime of life, who either fell or jumped into the river. He was uninjured by the wheel of the ferry-boat, and was rescued after being in the water only five or ten minutes. By every doctrine of chances, with fair treatment, he should have recovered. But what was done? He was pulled up the side of the tug-boat Ramapo with a boat hook, laid across the rail, doubled up like a half-shut jack-knife, with his head and body inwards and his legs overboard, and there he was allowed to hang, presumably to get the water out of him. I called out twice to those on the Ramapo, which was in plain hearing distance, to take the man off the rail, and lay him down on the deck, but no notice was taken of the direction, and there he hung as the boats separated. Of course the man died. A person in health could hardly stand such treatment. No one doubts the kind intentions of the crew of the Ramapo, but, on the other hand, it seems incredible that such ignorance and stupidity could exist among men employed about vessels. It is bad enough when landsmen roll half-drowned people on barrels to revive them, but for men whose business keeps them constantly liable to see such accidents treatment such as was resorted to in this instance was inexcusable. Proper rules to be followed in such cases, plainly printed, should be posted in every tug-boat and ferry-boat, indeed, upon every kind of craft that plies about our harbor, and in every place where watermen and 'longshoremen resort.'"

— It will be remembered that in February last a case of asphyxiation by illuminating gas was reported in which the patient, after lying for hours in an unconscious condition, was restored by means of transfusion of blood. A novel law suit has now grown out

of this case, the negro from whom the blood was taken having brought suit to recover compensation for the amount lost at the rate of ten cents a drop. All that he received at the time was five dollars, while he claims that the above price was promised him. On the other side it is denied that any such rate of compensation was agreed to, and that the negro signed a receipt for five dollars in full for all services rendered by him. The court has reserved its decision in the case. It is estimated by counsel for the plaintiff that an ounce of blood contains 240 drops, and eight ounces (the amount drawn) at ten cents a drop would thus be appraised at \$192, the value of the attendance, which was continued through four days, bringing the bill up to \$250.

— On the 10th of July a lad of sixteen died of hydrophobia at Fort Hamilton. About six weeks ago he was scratched by a cat over the left eye and on the back of the neck, and it is surmised that the cat had previously had a fight with a rabid dog, and had received some of the virus on its claws. The animal was killed at the time. Curare was administered hypodermically by Post-Surgeon Vollum, who was called in consultation in the case, with the effect of completely controlling the convulsions and all muscular spasm, and it is believed by him that if the remedy could have been used sufficiently early the patient's life would have been saved. As it was he died from exhaustion induced by the terrific struggle through which he had passed before the curare was administered.

— A fatal case of hydrophobia is also reported from Sag Harbor, Long Island, on the 6th of July, the patient being a young boy, of New York, a pupil at the School of the Sacred Heart of Mercy, located there, who, it is said, was bitten in the face by a dog in November last.

Correspondence.

LETTER FROM ST. LOUIS.

St. Louis, July 10, 1883.

MR. EDITOR, — Since my last letter medical circles have been very quiet. Small-pox has hung on with an unusual tenacity far into the hot weather, and has only gradually faded. Now, however, it is about gone, and the effects of the recent high water are becoming manifest in an increase of malarial and diarrhoeal diseases.

There has been quite a breeze in the St. Louis Medical Society regarding the action of one of their delegates to the Cleveland Convention, whereby the Society has been put in a very false position regarding the Code, and made to seem of the same mind as the New York Society concerning its revocation and the establishment of a new code. Drs. Pollak, Porter, and Love were its delegates, and before starting Dr. Pollak introduced into the local Society a resolution requesting the National Association to revise the existing Code, if in their opinion such revision were necessary. He was instructed to consult his colleagues and the State delegates as to the propriety of presenting such a resolution at Cleveland, and if they concurred

to so present it. Instead of so doing he, without any consultation, writes a preamble and presents a resolution on behalf of the St. Louis Society, advocating the rescinding of the present Code and the framing of a new one. His motion was very objectionable to the meeting, and was quickly tabled. These are the facts in the case, and on the first opportunity the St. Louis Society repudiated his action by a nearly unanimous vote, and by so doing declared itself in harmony with the Cleveland Convention.

The law creating a State Board of Health went into effect July 1st, and the Governor has named the following gentlemen as its members: E. H. Gregory, M. D., W. B. Conery, M. D., P. D. Yost, M. D. (Eclectic), of St. Louis; — Cox, M. D. (Homœopath), of Springfield; J. C. Hearne, M. D., of Hannibal; H. F. Hereford, M. D., of Kansas City, and G. T. Bartlett, M. D., of Poplar Bluff. Dr. Gregory will probably be elected President, and Dr. Conery Secretary. It is expected that the Board will shape its policy after that of the Illinois Board, and be of much service to the profession in the State.

A sad accident occurred at the City Hospital not long ago, by which two patients lost their lives and another was put in great danger. The physician prescribed for each a dose of salts, but by the druggist's mistake a solution of chloral hydrate was given instead. The custom had been to keep these and some other drugs in solution ready for dispensing, and the wrong bottle was taken. The jury found that there were not sufficient grounds for a charge of criminal carelessness, and the druggist was discharged.

Respectfully,

J. B. SHAPLEIGH, M. D.

Miscellany.

TUMORS IN THE TEMPORAL REGION.

THIS subject has been thoroughly investigated by C. Bottez,¹ whose researches are spoken of by the *Revue Medicale* in the following terms: —

"A work altogether remarkable, and one which no one will fail to read whom chance may bring in contact with tumors situated in this region. All the lesions are passed in review, the symptoms, the course, and the possible complications being analyzed with peculiar care. No detail is too minute for the author's notice, and no part of the description superfluous."

The following are the conclusions of M. Bottez: —

Tumors in the temporal region are rare. Some are superficial (outside of the temporal muscle) and are generally either epitheliomata or of a vascular nature (anévrismes angiomes). Others are deep (under the temporal muscle). Such are almost always malignant (sarcomata or carcinomata), more often of osteoperiosteic origin, sometimes coming from the dura mater.

Deep abscesses are rare. Nearly all the deep tumors have as a common characteristic more or less rapid progression, thinning of bone, and even perforation into the cranial cavity, a result which the surgeon should always have in mind when operating in this region.

The form most common, which has to do with sarcoma or carcinoma, is without doubt the encephaloidal.

¹ Contribution à l'Etude clinique des Tumeurs de la Région temporale. Thèse de Paris, 1882.

It is impossible in the actual state of the question to say in presence of a deep tumor whether it is a fleshy or a carcinomatous growth, there existing no absolutely diagnostic sign.

In connection with these investigations the case reported by Bryant in the *Lancet* (January 28, 1883) is of especial interest. The case was that of a girl, aged ten years, who had a tough and almost nonsensitive tumor of rapid growth, behind the left ear, involving the temporal and occipital bones. After a period during which the tumor caused no symptoms whatever appeared headache, vomiting, paralysis of the left facial nerve, and deafness in the left ear. Incision over the mastoid process allowed the escape of a little pus and several pieces of necrosed bone. The paralysis increased, although the hearing improved; there followed intense pain in the neck and back, difficulty in moving the tongue, dysphagia, and finally death with increasing irregularity of breathing.

The autopsy revealed a sarcoma filling the entire posterior temporal cavity. The tumor had flattened the left cerebellar hemisphere as well as the medulla oblongata, compressing the nerve origins from the latter, especially the emerging fibres of the left facial nerve.

ANKLE CLONUS IN RELATION TO THE HEIGHT OF THE INDIVIDUAL.

DR. ALEXANDER JAMES, in the *Edinburgh Medical Journal*, June, 1883, presents the results of a number of experiments on the rate of ankle clonus in healthy individuals, which show a probable relation between rapidity of the vibrations and the distance of the muscles concerned from their nerve centre in the cord. It has been noticed that the knee clonus is for the most part more rapid than the ankle, the elbow more than the knee, and the head the most rapid of all. And the author assumes that this difference in the rate of the clonus is due to the difference in distance of the muscles from their centre in the cord. If this be so, we might expect to find differences in the rapidity of clonus in individuals of different heights; and as the height of the individual depends mainly on the length of his legs, this difference would be best marked in the ankle clonus. That this should be the case is fortunate, inasmuch as this clonus is the one which can be most readily induced by healthy individuals, and consequently is the one which can be most readily timed. *A priori* the author arrives at this conclusion: Assuming that (speaking roughly) the distance between the muscles concerned in the production of ankle clonus and their spinal centre is one yard in individuals a little over six feet in height, whilst in individuals a little over five feet in height it is two feet; and further, supposing that the nerve impulse travels at the rate of 120 feet per second, that the latent period of muscle contraction is $\frac{1}{10}$ sec., and that the time required for a reflex act is $\frac{1}{100}$ sec. Then $\frac{1}{100}$ sec. + $\frac{1}{10}$ sec. + $\frac{1}{10}$ sec. = $\frac{1}{50}$ sec., and $\frac{1}{100}$ sec. + $\frac{1}{10}$ sec. + $\frac{1}{10}$ sec. = $\frac{1}{25}$ sec. In this way the rapidity of the ankle clonus in an individual six feet in height should be $\frac{1}{25}$ = 5.8 per sec., whilst that of one about five feet in height should be $\frac{1}{35}$ = 6.5 per second.

The experiments were performed mostly on robust young men, averaging twenty-three years of age, and all the subjects were selected as presumably healthy persons, at least so far as their nervous and muscular

systems were concerned. The results were as follows:—

In individuals varying in height between six feet and six feet four inches (ten cases) the average clonus was 5.84 per sec., the lowest being 5 and the highest 6.75 per second.

In individuals between five feet six inches and five feet eleven inches (twenty-nine cases) the average was 6.48 per sec.; the lowest being 5.7 and the highest 7.4 per second.

In individuals between five feet and five feet five inches (nine cases, of which two were females) the average was 6.91 per sec.; the lowest being 6.7, and the highest 7.2 per second.

In two cases, females, of four feet eleven inches in height, the clonus was 7.8 and 7.3 per sec.; and in one child, suffering from paralysis, in the Children's Hospital, in height about four feet six inches, the clonus was 7.8 per second.

The author says in comment:—

"A study of these results in this way shows, I think, that the theory with which we started is in the main correct, that is, that, *cæteris paribus*, the rapidity of the clonus bears an inverse proportion to the height of the individual. That there should be great differences in individuals of the same height is, of course, to be expected. We know that the rate of cerebral processes varies as evidenced, perhaps best of all, by the fact that the "cerebral equivalent" requires to be obtained for men engaged in astronomical work, and we may be certain that the "spinal equivalent" will present corresponding variations. To have discussed this point would have required a much greater number of observations. I have no hesitation, however, in saying that individuals of the so-called nervous temperament have a rapid clonus as compared with those who appear phlegmatic; and it appears to me, also, that men who take part in athletic sports have a more rapid clonus than their physically less active neighbors. The influence of sex I can say almost nothing about, but I feel sure that as age advances the clonus tends to become less rapid."

THE RELATION BETWEEN RUBEOLA AND MORBILLI.

We find in the *American Journal of Obstetrics* for April a résumé of an article by Dr. Kassowitz¹ on the above subject. In 1874, Dr. Kassowitz expressed his opinion as against the existence of a specific rubeola, claiming that sufficient proof of it had not been brought forward. He now takes pleasure in reporting from his own observation a very extensive epidemic of röteln, during which in no single case a transmission from röteln to genuine measles could be demonstrated. The symptoms and course corresponded with the descriptions of Emminghaus, one third of the cases showing distinct enlargement of the cervical lymph glands. The contagiousness was undoubted; the incubation was between fourteen and twenty days. According to Kassowitz's observations, rubeola is entirely distinct from morbilli, yet the resemblance is so apparent that he must confess that röteln stands closer to measles than any other disease known to us, and perhaps, he suggests, this resemblance depends upon some micro-organism as yet unknown. He supposes between measles and röteln, as between variola and

¹ Wien. Med. Blatt, 4-6, 1882.

varicella, some connection, but leaves the question undecided. The analogy between variola and varicella on the one hand, and morbilli and rubeola on the other hand, might perhaps consist in this, that *very exceptionally* from the infection of varicella variola might arise as from the infection of rubeola morbilli might arise. In a debate on this question in the London Medical Congress, Cheadle reported an epidemic of mild cases of rubeola closely followed by severe cases, which might have given rise to a suspicion of transmission of rubeola into morbilli. Kassowitz recalls, with a side glance at the micrococci, that micro-organisms are made either benignant or malignant at the will of the experimenter. Variola and vaccinia, which, although their eruptions are so similar, are yet clinically so widely separated that they are always considered two different diseases,

are, in fact, probably identical. Vaccine is variola virus changed by transplantation to another species of animal. He remarks that even the transmission of variola by variolation makes the disease more similar to vaccinia, in that it runs a milder course, and the pustules occur only at the point of inoculation; on the other hand, vaccinia in children who suffer from an extensive moist eczema, often on the tenth or eleventh day causes an extensive pustular development upon the eczematous surfaces, perhaps because the increased fluxion to the diseased portions of the skin carries a greater quantity of micro-organisms. "Let us, then, not be in too great haste to divide once, and for all, from our present stand-point of scientific observation, the cord between rubeola and morbilli, and between variola and varicella."

REPORTED MORTALITY FOR THE WEEK ENDING JULY 14, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Diphtheria and Croup.	Typhoid Fever.
New York.....	1,206,590	1110	660	47.16	10.17	39.15	2.16	.72
Philadelphia.....	846,984	563	302	36.05	10.12	26.27	3.02	2.49
Brooklyn.....	566,689	383	248	49.93	6.93	45.39	2.67	—
Chicago.....	503,304	295	181	42.04	6.78	33.11	3.05	1.36
Boston.....	362,535	265	143	37.60	7.52	32.71	1.13	1.13
St. Louis.....	350,522	231	155	43.20	6.91	33.70	4.32	.93
Baltimore.....	332,190	227	137	45.76	9.68	37.40	3.42	.88
Cincinnati.....	255,708	112	55	25.87	8.92	22.30	—	1.78
New Orleans.....	216,140	117	42	29.06	13.67	3.42	6.84	—
District of Columbia.....	177,638	130	76	36.14	6.92	31.53	.77	1.54
Pittsburg.....(1883)	175,000	100	57	32.00	7.00	26.00	3.00	—
Buffalo.....	155,137	50	20	26.00	12.00	16.00	—	—
Milwaukee.....	115,578	44	30	15.89	10.08	10.08	—	.23
Providence.....(1883)	116,755	56	24	37.49	8.92	30.34	1.79	3.58
New Haven.....(1883)	73,000	44	20	42.13	2.27	31.78	2.27	2.27
Charleston.....	49,999	41	22	17.08	9.76	12.20	—	.24
Nashville.....	43,461	36	14	27.77	13.33	25.00	—	2.77
Lowell.....	59,485	49	31	40.80	12.24	32.64	4.08	2.04
Worcester.....	58,295	45	32	44.44	19.99	37.77	2.22	—
Cambridge.....	52,740	43	28	51.15	9.36	37.20	6.97	—
Fall River.....	49,006	30	25	56.66	6.66	43.33	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	13	2	15.38	15.38	—	—	—
Springfield.....	33,340	22	16	68.18	9.09	—	—	—
Salem.....	27,598	10	2	—	30.00	—	—	—
New Bedford.....	26,875	18	8	33.33	6.66	13.33	3.33	3.33
Somerville.....	24,985	10	5	40.00	20.00	40.00	—	—
Holyoke.....	21,851	13	9	69.21	—	69.21	—	—
Chelsea.....	21,785	8	4	12.50	12.50	—	12.50	—
Taunton.....	21,213	1	0	—	—	—	—	—
Gloucester.....	19,329	6	1	—	33.33	—	—	—
Haverhill.....	18,475	10	5	60.00	10.00	40.00	10.00	—
Newton.....	16,995	4	1	25.00	—	25.00	—	—
Brockton.....	13,608	4	0	50.00	—	25.00	25.00	—
Newburyport.....	13,537	8	5	37.50	—	—	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	—	—	—	—	—	—	—
Eighteen Massachusetts towns.....	138,932	38	11	5.26	26.32	5.26	—	—

Deaths reported 4136: under five years of age 2371: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 1691, diarrhoeal diseases 1352, consumption 387, lung diseases 155, diphtheria and croup 99, typhoid fever 48, scarlet fever 45, measles 40, malarial fevers 36, small-pox 20, cerebro-spinal meningitis 15, whooping-cough 14, puerperal fever 13, erysipelas nine. From *scarlet fever*, Philadelphia 11, New York nine, Chicago seven, Baltimore four, Newburyport three, Boston, St. Louis, Buffalo, and Milwaukee two each, Brooklyn, Cincinnati, and New Orleans one each. From *measles*, New

York 22, Baltimore four, Philadelphia, Brooklyn, and Boston three each, St. Louis, New Orleans, Buffalo, Worcester, and Cambridge one each. From *malarial fevers*, New York 19, New Orleans eight, St. Louis four, Brooklyn and Chicago two each, Charleston one. From *small-pox*, New Orleans 17, Philadelphia three. From *cerebro-spinal meningitis*, New York, Philadelphia, Chicago, and Lynn two each, St. Louis, Cincinnati, Buffalo, Lowell, Worcester, Fall River, and Springfield one each. From *whooping-cough*, New York and District of Columbia three each, New Haven two, Philadelphia, Brooklyn, Baltimore, New Orleans, Pittsburg, and Springfield one each. From

puerperal fever, Chicago three, Philadelphia, Boston, and Pittsburgh two each, Providence, New Haven, Cambridge, and Haverhill one each. From *erysipelas*, New York, Philadelphia, and Chicago two each, Buffalo, Cambridge, and Springfield one each.

Seven cases of small-pox were reported in St. Louis; scarlet fever 19, measles 13, diphtheria 13, and typhoid fever 11 in Boston; scarlet fever 13, and diphtheria three in Milwaukee.

In 36 cities and towns of Massachusetts, with an estimated population of 1,112,069 (estimated population of the State 1,922,530), the total death-rate for the week was 27.01 against 20.04 and 16.49, for the previous two weeks.

For the week ending June 23d, in 170 German cities and towns, with an estimated population of 8,625,811, the death-rate was 26.8. Deaths reported 4453; under five years of age, 2440; consumption 600, lung diseases 378, diarrhoeal diseases 332, diphtheria and croup 155, measles and *rötheln* 126, scarlet fever 56, typhoid fever 46, whooping-cough 42, puerperal fever 18, small-pox (Breslau, Berlin, and Frankfort a. M. one each) three, typhus fever (Frankfort a. M. one) one. The death-rates ranged from 14.5 in Potsdam to 39.7 in Posen; Königsberg 30.8; Breslau 32.2; Munich 34; Dresden 25.8; Berlin 39.5;

Leipzig 22.7; Hamburg 21.6; Cologne 31.1; Frankfort a. M. 17.3; Straaburg 29.7.

For the week ending June 23d, in the Swiss towns, there were 33 deaths from consumption, lung diseases 20, diarrhoeal diseases 10, diphtheria and croup seven, measles four, *erysipelas* three, scarlet fever one, whooping-cough one, typhoid fever one. The death-rates were at Geneva 14.4, Zurich 18, Basle 15.9, Berne 29.4.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending June 30th, the death-rate was 19.3. Deaths reported 3191: acute diseases of the respiratory organs (London) 226, measles 129, diarrhoea 124, scarlet fever 84, whooping-cough 60, fever 41, diphtheria 22, small-pox (London four, Birmingham two, Manchester and Newcastle-on-Tyne one each) eight. The death-rates ranged from 13.5 in Portsmouth to 27.1 in Manchester; Bristol 14.3; Leicester 16.1; Leeds 17.6; London 18.9; Sunderland 20.2; Birmingham 21.8; Liverpool 23.1; Newcastle-on-Tyne 26.5. In Edinburgh 20.1; Glasgow 28.3; Dublin 26.1.

The meteorological record for the week ending July 14th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
July, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 8	29.922	59	77	56	87	100	100	96	NE	E	NE	12	12	8	O	R	R	12.30	.58
Mon., 9	30.009	60	66	54	87	78	78	81	NE	E	SW	12	8	5	T	C	C	—	—
Tues., 10	29.956	65	76	55	87	66	93	82	W	SE	SW	4	9	8	O	O	C	—	—
Wed., 11	29.871	75	86	60	76	44	82	67	SW	SW	SW	11	11	8	C	C	C	—	—
Thurs., 12	29.836	76	87	59	74	58	81	71	SW	W	SW	6	16	8	C	C	C	—	—
Fri., 13	29.778	73	80	67	93	69	90	84	SW	S	S	7	12	5	O	O	C	—	—
Sat., 14	29.816	72	89	65	84	71	78	78	SW	E	W	2	6	6	O	C	C	—	—
Means, the week.	29.982	68.5	89	54				80										15.00	.94

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JULY 13, 1883, TO JULY 20, 1883.

MACGRUDER, D. L., lieutenant-colonel and surgeon, medical director headquarters, Department of the Missouri. Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 145, Department of the Missouri, July 12, 1883.

ELBREY, FREDERICK W., captain and assistant surgeon. The leave of absence granted on surgeon's certificate of disability by S. O. 26, A. G. O., January 31, 1883, further extended six months on surgeon's certificate of disability. S. O. 162, A. G. O., July 16, 1883.

POWELL, JUNIUS L., captain and assistant surgeon. Assigned to duty at Fort Columbus, N. Y. H. S. O. 130, Department of the East, July 18, 1883.

RICHARD, CHARLES, first lieutenant and assistant surgeon. Assigned to duty at Fort Adams, Newport, R. I. S. O. 130, Department of the East, July 18, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JULY 21, 1883.

DR. HORACE BROWN SCOTT appointed an assistant surgeon.

CHARLES W. RUSH, OLIVER DIEHL, J. H. BRYAN, and J. D. GATEWOOD, assistant surgeons, promoted to passed assistant surgeons.

C. H. WHITE, surgeon, and A. C. HEFFINGER, passed assistant surgeon, detached from the Lackawanna; the former placed on waiting orders, and the latter granted three months' leave.

T. WOOLVERTON, surgeon, detached from the Naval Hospital, Philadelphia, on the 31st of July, and granted leave of absence for one year, with permission to leave the United States.

BOOKS AND PAMPHLETS RECEIVED.—A Case of Primary Mounomania (Primäre Verrücktheit). By C. B. Burr, M. D., Assistant Physician to the Eastern Michigan Asylum, Pontiac. (Reprint.) 1883.

Experimental Researches of the Tension of the Vocal Bands: (a) The Action of the Thyro-Cricoid Muscle; (b) The Action of the Expiratory Blast of Air. By F. H. Hooper, M. D., Boston, Assistant Physician to the Clinic for Diseases of the Throat, Massachusetts General Hospital, etc.

Pemphigus and the Diseases liable to be Mistaken for It. By George H. Rohé, M. D., Professor of Hygiene and Clinical Dermatology, College of Physicians and Surgeons, Baltimore, etc. (Reprint.) 1883.

The Treatment of the Various Forms of Acne. By George H. Rohé, M. D. (Reprint.) Baltimore. 1883.

Hints on the Treatment of Some Parasitic Skin Diseases. By George H. Rohé, M. D. (Reprint.) 1883.

Seventh Annual Report of the State Board of Health of Wisconsin. 1882.

The Control of Defective Sight on Land and Sea, with especial Reference to the Subject of Color-Blindness. A Résumé of What has been done in this Country and Abroad toward arriving at Proper Legislative Action. Reprinted from the Railway Review. Chicago. 1883.

A System of Surgery, Theoretical and Practical, in Treatises by Various Authors. Edited by T. Holmes, M. A. Cantab., and J. W. Hulke, F. R. S. Third Edition, in Three Volumes. With Illustrations. New York: William Wood & Co. 1883. Vol. I. General Pathology and Local Injuries. Vol. II. Surgical Diseases of the Organs of Special Sense, of Innervation and Locomotion, of Respiration and Digestion, and of the Skin.

Lectures.

ON MEDICAL EVIDENCE AND MEDICAL WITNESSES.¹

ABSTRACT OF A LECTURE DELIVERED AT THE HARVARD MEDICAL SCHOOL.

BY F. W. DRAPER, M. D.,
Lecturer on Forensic Medicine.

Now I do not exaggerate when I say that, in practice, the performances of medical experts in America and in England are, as a general rule, a mere caricature of the conduct and acquirements which I have hastily set forth, so deplorably do they fall below the ideal standard. You all know very well the usual course which so-called medical expert testimony takes. In an action at law involving medico-legal questions, the government or the plaintiff retains a medical witness, the best and most serviceable that can be secured, to testify in matters of opinion on and for that side. Inevitably he becomes a partisan, a medical advocate for the party by whom he is employed, and by whose money he is rewarded. He cannot help becoming biased, however honest his intentions may be. He cannot help regarding his professional opinions as so far an elastic material that he may mould or stretch them at will in the interest of his own side and as far as may be against the interest of the opposing side. Ignorant, dogmatic, absurd, and illogical opinions are often presented to court and jury for their instruction, and as representing the best and fullest expression of medical science touching the questions at issue. And then comes the cross-examination, more or less thorough and effective in upsetting the direct testimony, more or less dictated by the medical expert, who usually sits conveniently near the elbow of the examining counsel for the very purpose of suggesting embarrassing questions. Presently comes the turn of the other side, and a medical expert for that party is ready with his opinions to refute and neutralize those previously advanced, swearing stoutly to the effect that the medical expert for the plaintiff is all wrong and unworthy of credence. Thus modern American medical expert testimony comes to be a tilt at contradictions, to the scandal and reproach of the medical profession and the amusement of all the spectators. The very purpose for which the testimony is introduced is largely subverted, and self-respecting physicians have come to feel that there is small honor and less pleasure in this kind of service, and that it is best not to accept invitations to appear as experts, only to be abused by counsel, contradicted by adverse testimony, and made ridiculous before all in the court-room, not to mention that larger audience which reads the newspapers in the world outside.

The causes of all this pitiable business lie partly on a legal and partly on a medical basis. The legal customs and regulations under which expert testimony is introduced tend toward the very abuses described. Each party to a suit may employ without hindrance as much expert testimony as he likes or as he can pay for. This makes the partisanship cumulative. The experts are no longer *amici curiæ* after the fashion of the Roman law, but are medical advocates interested in winning a verdict; sometimes, as in civil suits, they are interested in a peculiar sense from the knowledge

that on the verdict depends their chance of securing the coveted fees through a share of the spoils.

Then when, in addition to this, we recall the license allowed to counsel in cross-examination, the fatal facility with which traps are set so that the witness may stumble and be discomfited, we recognize another of the reasons why this kind of testimony is discredited. The lawyer is hired to gain the case of his client, and it is one of his chief duties to throw doubt over the testimony which is offered adversely to his client's interests.

Another mischievous factor lies in the loose legal limitations and rulings touching the qualifications of those who present themselves as experts. The courts admit as experts many who have not the slightest claim to the title, and whose chief superiority is in impudent self-assertion. A regularly educated physician, whose practice is orthodox, has no advantage over the man whose professional trade-mark is some exclusive dogma or narrow creed. The ignorant old pretender, whose gray hairs cover a minimum of knowledge, is, in the eye of the court, apparently the peer of the brightest and best exponent of medical science. Under such conditions it is not marvelous that expert testimony has become a trade, and that men with a medical diploma stand ready, and are known by lawyers as so doing, to give their services in court for the sake of the fees attached. Nor is it strange that legal writers are willing to discredit all expert testimony because of the deserved reproach which incapable men have thrown upon it. Greenleaf says: "That the testimony of experts in many, if not in most, cases is of little value is universally agreed;" and another author declares that "within the last ten years trials have taken place in which the medical witnesses have done more harm than good, more to mislead the jury than to instruct them."

Now many remedies have been proposed for all this. We hear of no such great abuses and scandals in Germany, where judicial matters connected with medical science are submitted to an impartial commission appointed by the government, and where the medico-legal conclusions are submitted as evidence in writing. In this country it has been proposed that experts, limited in number, shall be appointed by the court, and authorized to make any needed investigations in anticipation of the trial at which they will appear. The effect of this would be that the testimony of such experts, independent of partisan bias, disinterested and free from the mercenary reproach, would carry a weight with a jury altogether greater than mere *ex parte* witnesses selected on account either of their known dogmatism or their convenient pliability. An improvement upon the method here mentioned has been suggested, whereby, instead of leaving the appointment of experts wholly in the discretion of the court, their nomination, prior to their appointment, should rest upon the agreement of the parties at issue, thus securing the element of fairness more fully. To some such improvement in the choice of medical experts we are sure to come sooner or later.

I pass now to matters of more immediate practical concern, namely, to some of your rights and obligations when you become medical witnesses, and to some rules of conduct which will be of service to you in court. And first of the summons. Every witness is entitled to receive a formal written summons before he is obliged to appear in court. This summons, tech-

¹ Concluded from page 75.

nically called a subpoena, is to be left either with the witness personally or at his place of abode, at least twenty-four hours before the trial. In civil cases, it is a rule of the common law, and, in this State, of the statute law also, that a witness shall receive with his summons the fees allowed by law for one day's attendance, and for traveling to and from the court. In criminal cases no tender of fees is necessary on the part of the government to compel its witnesses to attend, it being considered the duty of every citizen to obey a call of this description in a case in which he is himself in a certain sense a party; but if the witness is summoned for the defense in a criminal trial he need not answer except on payment or tender beforehand of his legal fees. If the witness is in the court-room as a spectator at a criminal trial he may be summoned to the witness-stand without the formality of a subpoena.

But if the witness is entitled to a formal call to court he is at the same time under obligation to obey the call. Failure to respond renders the delinquent liable to pay damages to the party suffering loss through his absence, and also to pay a fine not exceeding twenty dollars for a "contempt of the court." Certain "reasonable excuses" are, however, admitted. Physical disability is always a valid cause for indulgence; it is proved by a medical certificate. If a summons is received to attend a criminal and a civil suit at the same hour the criminal trial will have the preference. In other regards the rule of "first come, first served" will hold.

It has been a question of considerable interest with medico-legal writers whether a medical man can be compelled to appear in court as a skilled witness without his consent. Some judicial rulings are recorded to the effect that an expert is not bound to attend at a trial in answer to a subpoena. Thus Lord Campbell: "A scientific witness is not obliged to appear upon being served with a subpoena, and he ought not to be subpoenaed. If the witness knew any matter of fact he might be compelled to attend, but he could not be compelled to give his attendance to speak to matters of opinion." And Judge Sprague, of the United States District Court, affirms the same view. But the most logical, as also the most general, view is that the summons is a peremptory call, not to be construed by the expert or by any one else according to any hypothesis of his own. It is an order for personal attendance in court, and should be obeyed if within the range of physical ability. But once put upon the witness-stand (assuming now that he has no knowledge of the facts of the case at issue) his obligation to the public ceases, and he stands in the relation of any professional man consulted about a subject upon which his opinion is sought. It is evident that the skill and professional experience of a man are so far his own property that he cannot be compelled to bestow it upon a second party; neither has the public, any more than a private individual, the right to extort services from him on the witness-stand; precisely as in his office his opinions may be given or withheld at his pleasure, so far as the control of the court is concerned, and a refusal to express an opinion is not punishable as a contempt of court. Whoever calls for an opinion from him is under an obligation to remunerate him, and he may decline to testify as an expert until the party calling him either pays or has agreed to pay him. When, however, his testimony has been given he has placed it beyond his recall, and

he cannot decline to repeat it or to explain it on cross-examination. The declination must be made, if it be made at all, at the beginning of the direct examination, when the first question requiring the expression of an opinion in the answer is asked. It is the rare exception, however, that these matters give much trouble in practice. In nearly every case the medical witness understands beforehand just the relation which he is to hold to the case, and prepares himself accordingly. It is only when a physician is called as an ordinary witness to testify to facts that embarrassment arises through an attempt on the part of counsel to extract from him gratuitous medical opinions upon medico-legal questions involved in the case; if the witness uses due caution and declines firmly but courteously to be led in that direction his rights will be recognized.

And this leads us to the matter of fees for witness service. These are settled by statute for ordinary witnesses, and to medical men they seem to have been settled in a ridiculously small way. It is a source of much annoyance to physicians that they are obliged to interrupt their business and submit, sometimes for days together, to the inconveniences and delays of a trial in court, and that they are allowed such inadequate recompense, based as it is on the pay of day laborers, and graded, according to the degree of the court, from fifty cents to a dollar and fifty cents for each day's attendance, with allowances for travel at the rate of five cents a mile, "out and home." Fees for expert testimony vary according to the witness's tact in making a good preliminary arrangement, according to the importance of the case, the fullness of the purse which pays the bills, and the expert's opinion of the value of his services. The usual rate is from twenty-five to fifty dollars for each day's attendance. Chemists charge according to the time spent and the difficulty of their work.

Now, once in court as a witness, what rights has the physician in the course of his examination? He has the right that he shall fully understand a question before he answers it; if he does not understand it he has the right and it is his duty to ask its repetition. Some men, and lawyers are not above criticism in this regard, lack the ability to ask questions connectedly, simply, and intelligibly. It thus happens that the most absurd and inconsequent questions are sometimes given to physicians by lawyers in court, not perhaps with the intention to mislead or confuse, but chiefly from unfamiliarity with medical matters.

Some lawyers adopt the ingenious plan of compressing two or three questions before a single interrogation mark. A witness unwittingly answers the last, or the one which fixes his attention. The same answer may not apply to all the queries, but the witness may find too late that it has been made to do double or multiple duty.

A medical witness has the right within certain well-defined limits to refer to notes or memoranda on the witness-stand. The rule of law on this matter is that notes made by the witness coincidentally with or immediately after the occurrence to which they refer may be used to refresh the memory; but if they were made after an interval of weeks or months they cannot be so used. It is not necessary that they shall have been made by the witness himself or be in his handwriting, if only they were made at the time under his inspection. But if the transaction or facts noted have completely escaped from the memory of the witness,

and all he can say is that he believes the memoranda to be true, then they are not allowed.

The general rule as to the inadmissibility of such written evidence is farther departed from in the case of medical or other scientific detailed reports; these the witness is allowed to read, upon the ground that the medical and other facts in the report are generally so numerous and technical that the memory would probably fail to present them with completeness on demand. Much more reliance would be placed on a formal report made out by him when the subject was fresh in the recollection, while there would presumably be no personal interest in the case on the part of the reporter, and his document would thus be above suspicion as to its sincerity.

But an expert is not permitted to quote opinions from books in support of his own position, or in substitution therefor. The author is not under oath. But although the witness, while properly using medico-legal writings to shape his own opinion in the case, cannot otherwise make them available upon the direct examination, yet he may be asked upon cross-examination if he accepts a writer, who is named, as an authority; and, if so, whether a certain opinion expressed in a quotation from this writer is a reliable one, and in accordance with the witness's views. Be sure, before answering such a question, that the quotation is given correctly and in full, with all its qualifying clauses.

A medical witness is entitled, in the next place, to courteous and ingenuous treatment at the hands of counsel. There is a general impression that physicians are the especial objects of abuse from cross-examining advocates; from the lawyer whose client summons you considerate treatment may be expected, but from the counsel for the "other side" some rough handling in the way of questioning may be looked for. Whether right or wrong, the traditional rules of law allow this. Lord Brougham has said that an advocate might do everything in his power to gain his cause, even if the State were ruined thereby; and it sometimes seems to the witness that lawyers believed and practiced this extreme doctrine literally. But while there are some who are notorious for their insolent bearing and unfairness toward witnesses, they do not represent the general tone of the legal profession in this regard at the present day. Mr. Stephen, an eminent British barrister, has remarked that "every contemptuous and even discourteous expression, every query leading nowhere except to the end of confusing the mind or irritating the temper of a witness, ought surely to be reckoned as overpassing the legitimate limits of the counsel's office, and as such be regarded with universal disapprobation." By the majority of lawyers this rule of conduct is recognized, and any considerable departure from it in the examination of a medical witness who shows every appearance of honesty and intelligence in his favor is very apt to injure, in the eyes of the jury, the cause of the counsel who resorts to it.

Professor Taylor says that any advice respecting the manner in which a medical witness should give his evidence, his personal conduct on the witness-stand, is like the directions given to prevent drowning, and is invariably forgotten when the individual is most in need of it. Nevertheless, I venture to add a few hints in conclusion which may be of service. Very much of a medical witness's success evidently depends on his natural temper and self control as well as on his preparation for his examination. Some are diffident, and

suffer from a misfortune which they cannot overcome; others cannot control their speech, their tongues outrunning their judgment and bringing sure discomfiture; others have an irritable temper, and, like Dr. Tuffnell, when they hear the "roars" of the counsel, consider that they have a right to roar also. But to all these, and to others who in spite of themselves are compelled to stand and deliver in court under trying and novel circumstances, the following suggestions may be useful:—

Obviously it goes without saying that a witness should be well prepared on all parts of the subject on which he is to give evidence. But as no man can be expected to know everything, so no one can be hanged for ignorance. Therefore when you are clear that you cannot answer a question without guessing, do not hesitate to say, "I don't know. I cannot give any opinion on that point." You will lose nothing by showing your evident sincerity, and nothing so baffles a troublesome cross-examiner as just such plain sincerity. But having replied in this manner, beware how you are adroitly drawn away from this point by further questions.

Answer all interrogatories directly and decidedly, without ambiguity or evasion, and in a tone of voice to be heard readily by all concerned. "To be accurate," says Tidy, "is a thousand times better than to appear brilliant." The nearer your replies approach the monosyllables "yes" and "no," the better for your comfort and character as a witness. If by a proper consideration of all the facts (and one ought not to express an opinion otherwise) the witness has come to a conclusion for which he can give reasons, his answer should be presented in plain and positive language, free from the suggestion of guessing. One who has not formed a conclusion is not in a position to give satisfactory evidence, and any attempt that he may make to manufacture deductions on the spot will result in disaster to him if the counsel does his duty.

Be deliberate in manner. Think twice before answering. The swift witness always gets into trouble. Have in your mind the remote and indirect as well as the immediate and direct effect of your replies. I do not mean that the witness should be obviously dilatory in answering, for that course would soon result to his annoyance, but the full purport of every question should be comprehended, and its answer should be framed in the mind with some care before it is expressed. Avoid exaggerated language. There is a tendency among physicians to describe their observations in the superlative degree, to say that a part is "intensely" inflamed, or that a hæmorrhage was "extremely severe." The cross-examining lawyer will be likely to compel you to explain your notion of such terms if you have the misfortune to use them.

Especially ought you to be cautioned to use language that can be understood. Recollect that you are speaking not to physicians, but to men who are wholly ignorant of the meaning of medical terms, even of the most ordinary kinds. To the court and the bar such technical words are presumably unintelligible; to the jury they are worse than a dead language. If any one thing more than another has served to render doctors ridiculous and uncomfortable under a cross-examination it is their misfortune in an unconscious habit of using scientific terms. Advantage is always taken to get some fun out of this for the amusement of those in the court-room. Therefore translate your

technical language to suit the comprehension of your auditors; say "skull" and not "cranium," "blood-clot" and not "apoplectic extravasation," and so on through the chapter.

Be on your guard, too, about being drawn into a discussion while on the witness-stand; you will almost always be at a disadvantage; the counsel with whom you engage in controversy is thoroughly at home while to you the situation is a novel and untried one, and your attempt at argument, if you are not exceptionally ready and self-reliant, will almost inevitably end in your embarrassment.

In repeating conversations give as nearly as possible the exact words used by both parties. For example, instead of saying "I asked the prisoner whether he knew anything about the murder, and he denied any knowledge," say, "I said to the prisoner, 'Do you know anything about this murder?'" and he replied 'No, I do not.'" In descriptions involving data of measurements, size, weight, and distance it is better, for the present, at all events until the public mind is more accustomed to the better standard, to avoid the suggestion of affectation, and to use the ordinary English terms instead of the more desirable metric nomenclature. Where absolute accuracy is not required use common and easily understood expressions of comparison, — finger's breadth, size of a silver dollar, size of a five-cent nickel, and so on.

I hardly need to add a word about avoiding partisanship by every power at your command; be fearlessly indifferent how your testimony may affect either side so long as that testimony is true. Answer the questions that are asked, but do not volunteer any statements. But if it should happen that, after having replied to the several questions from counsel on both sides, the witness knows that some material evidence in his possession has not appeared, he may then disclose the new facts to the judge, who would under such circumstances be found to admit them. But one should be very sure that what he is about to impart in this manner is relevant and material, lest he place himself in a false position, and render his motives open to misconstruction. It is right that you should know in this connection that physicians have no legal privileges by virtue of their professional relations to their patients; outrageous as it is to one's sense of honor, professional secrets are not safe from the inquisition of the witness-stand. The only relief lies in an appeal to the judge under such circumstances, and by his decision alone can the witness be guided as to how much of information obtained in the privacy of the sick-room is to be imparted.

And the last word is, that while every medical man should respond willingly to every summons which calls him to court, he should be chary about putting himself in the way of such call. If he considers his personal comfort and mental peace he will shun the court-room as much as he can. It is a place where the physician loses more than he gains in money and in reputation. "I fear not to assert," writes Dr. Gordon Smith, "that the instances in which it has happened that medical witnesses have come down from any judicial examination of importance without suffering more or less injury have not been many; that those in which credit has been gained have been fewer still; and that I know of no instance in which it can be satisfactorily shown that an individual reputation has been thereby established."

Original Articles.

A CONTRIBUTION TO THE STUDY OF THE TUBERCLE-BACILLUS.¹

BY HAROLD C. EENST, M. D., JAMAICA PLAIN.

Koch's² announcement in the spring of last year of his discovery of the specific organism lying at the bottom of and being the cause of tuberculosis marks an epoch in the history of this much-discussed pathological problem such as it had never known before.

Beginning with Villemin's³ experiments tending to show the inoculability of tubercle, this subject has attracted attention from the best observers of the time ever since, and their results have tended more and more to show the communicability of the disease. The strides of microscopic pathology and the facts observed in regard to micro-organisms in other forms of disease have assisted in preparing scientific minds for the discovery that is under consideration to-day.

The importance of Koch's facts has led to an immense amount of work in the same direction for purposes of confirmation or refutation. It is now more than a year since his results were first given to the public, and a review of what has been done since then will be of interest and importance. No discussion of the individual papers will be attempted, and only those will be mentioned which have for their object the determination of the existence of the tubercle-bacillus and its significance.

Koch's results — after a long series of experiments, in which he not only discovered the organism which he claimed to be the actual cause of tuberculosis, but proved the assertion by the most careful cultivations and inoculations — are now so well known as to require little comment here.

Since the publication of his experiments, investigations have been carried on with a view to the discovery of the tubercle-bacillus in all the morbid processes known as tuberculous. In all of these experiments, the proportion of success to failure has seemed to grow larger as observers have become more familiar with the manipulation necessary for the demonstration of the bacillus. The few who have directly denied its existence in the tissue, or its pathological significance if there, have either seen reason to change their views or are still at work upon the problem. Before Koch there were other observers claiming the discovery of the specific cause of tuberculosis; thus: as the result of his work, Klebs⁴ had announced his monas tuberculosum, an actively-moving organism; Schüller⁵ and Toussaint⁶ a spherical micrococcus; and Aufrecht⁷ speaks of a rod-shaped organism, which he found in the centre of tuberculous masses, and which he now claims to be identical with Koch's bacillus.

From all of these Koch's discovery differs, in that it has no movement, is rod-shaped, and more than twice as long as it is broad, — being from one quarter to wholly as long as the diameter of a red blood corpuscle, — and in that he has isolated his discovery by culti-

¹ Read before the Massachusetts Medical Society, June 12, 1883, and recommended for publication by the Society.

² R. Koch, Berlin. klin. Woch., April 10, 1882. Baumgarten, Centralblatt für die Med. Weis., No. 25, 1882.

³ Villemin, Etudes sur Tuberculose. Paris. 1868.

⁴ Klebs, Prager Med. Woch., Nos. 42, 43, 1877.

⁵ Schüller, Die Scrophulose und Tuberculöse Gelenkslerden, 1880.

⁶ Toussaint, Comptes Rendus, 1881.

⁷ Aufrecht, Pathologische Mittheilungen, Magdeburg, 1881.

vation and has produced the specific disease with the result, which none of the others have ever done.

Entering now upon the discussion of the papers that have been brought out by Koch's work, we come first upon that of Machiafara and Celli,¹ who published results showing that they had found the bacilli in fifteen cases of phthisis, — one with hæmoptysis and no physical signs, — and in the stools of phthisical patients in great numbers. They examined also, and with negative results in every examination, thirteen cases of other lung disease.

Formad,² after what he considers exhaustive research, grants that bacilli are present, but not invariably: he thinks that they may be the *causa mortis* by producing a fatal result in a process which would otherwise not be so, but he does not ascribe to this organism any quality which would make it a veritable *causa* or *materies morbi*.

Balmer and Fräntzel³ find the bacilli in enormous numbers in rapid cases of phthisis, and less numerous in the more chronic ones. "Infection fever" was always present in the cases in which bacilli were present in large numbers. They found bacilli very numerous in the tissue of tuberculous lung, in the walls of tuberculous ulcerations of the intestines, and in the pus of tuberculous joint affections. Their observations lead them to the following conclusions: They found the tubercle-bacillus in the sputum of one hundred and twenty cases of phthisis without exception. In the cases of lung disease not tuberculous tubercle-bacilli were never found. Therefore when they are found in the sputum we have a case of tuberculosis. On the other hand, when they are absent after repeated and careful examinations of the sputum, tuberculosis of the lung may be excluded. They consider that a perfect prognosis of a case may be given as the result of repeated examinations of the sputum extending over a period of weeks or even months. They also conclude that the most favorable soil for the growth of this bacillus is in the cheesy contents of a cavity rather than in its walls.

Hiller⁴ thinks it possible to formulate the dogma that "Initial hæmoptysis is a symptom of the infection of the lungs, standing in the relation of effect to cause."

Schmidt⁵ thought he had proved that the so-called tubercle-bacilli were fat crystals, because they disappeared if treated with ether. Hirschfelder⁶ has however shown that even after boiling the cover-glass in ether, and washing in fresh ether, the bacilli may be readily demonstrated by Ehrlich's method. Schmidt probably dissolved out the coloring matter, and has himself since come to a belief in the bacillus.

Ransome⁷ demonstrated the bacilli in the expired air of cases of undoubted phthisis.

An opponent of Koch's views on the specific nature of the tubercle-bacillus is Balogh,⁸ who says he has found bacilli in the marshes around Pesth, which are indistinguishable from the tubercle-bacillus. Inhalation experiments with these bacilli caused nodular growths in the lung in which the tubercle-bacillus was

found; and inoculation with scarlatinal urine and with bronchial sputum gave the same nodular growths. He took no measures — so far as reported — for the absolute exclusion of the tubercle-bacillus.

Professor Koryani⁹ found Koch's bacilli in the sputum of a case which had been regarded as one of pulmonary syphilis; by this means a correct diagnosis was reached.

Guttman¹⁰ has been unsuccessful in his researches, only finding the bacilli four times out of one hundred preparations of phthisical sputum, — all prepared after Ehrlich's method.

D'Espine¹¹ finds no correspondence between the number of the bacilli and the stage of the disease.

Lichtheim¹² has found bacilli in the sputum of patients with cough, before the lungs present any sign whatever. He considers, however, that the point of origin of inflammation must have some communication with the air passages before the bacilli can be discovered in the sputum, even in well-advanced tuberculosis. He found bacilli in the stools of intestinal tuberculosis, and especially in the ulcerations of the intestinal wall; he also found them in cases of tuberculous peritonitis.

Chiari¹³ thinks that the number of the bacilli is in direct proportion to the severity of the disease. He has never found any other bacilli staining as does Koch's.

Heron¹⁴ believes that the tubercle-bacillus furnishes a good prognostic guide, and that the more numerous it is the more rapidly fatal is the disease.

Smith¹⁵ demonstrated the tubercle-bacillus in the expired air of consumptives.

Pfeiffer,¹⁶ after a great number of observations, comes to the conclusion that the bacilli can always be found in the sputum of advanced tubercular disease of the lung, but that the examination must be repeated a great number of times before the definite exclusion of bacilli can be reached.

Babès,¹⁷ of Pesth, demonstrated the bacilli in the urine of three patients, in two of whom tuberculous nephritis with ulceration of the pelvis of the kidney was demonstrated afterwards in post-mortem examination; in one there was also tuberculous ulceration of the bladder.

Crämer¹⁸ and Menche¹⁹ both consider the tubercle-bacillus as a diagnostic landmark. Crämer, however, found an organism staining like the tubercle-bacillus in every case in twenty examinations of healthy stools. Menche claims that the examinations are liable to error because of imperfect staining; and, further, that possibly tuberculosis of the intestinal wall may be only manifest in the stools.

Fränkel²⁰ found numerous tubercle-bacilli in the pus of a scrofulous or tuberculous joint, and Dreschfeld²¹ confirms this by the same observation in a case of the same nature in the ankle. Fränkel has also found the

¹ Machiafara and Celli, *Gazette degli Ospit.*, October 29, 1882.

² Formad, *Phil. Med. Times*, November 18, 1882.

³ Balmer und Fräntzel, *Berliner klin. Woch.* No. 45, 1882.

⁴ Hiller, *Zeitschrift für die klin. Med.*, v. s. 138.

⁵ Schmidt, *Chicago Med. Journal and Examiner*, December, 1882.

⁶ Hirschfelder, *N. Y. Med. Record*, January 6, 1883.

⁷ Ransome, *British Med. Journal*, December 16, 1882.

⁸ Balogh, *Wiener Med. Woch.*, No. 51, 1882.

⁹ Koryani, *Wiener Med. Woch.*, No. 51, 1882.

¹⁰ Guttman, *Berliner klin. Woch.*, No. 52, 1882.

¹¹ D'Espine, *Révue Méd. de la Science Romaine*, December, 1882.

¹² Lichtheim, *Fortschritte der Med.* No. 1, 1883.

¹³ Chiari, *Wiener Med. Presse*, January 7, 1883.

¹⁴ Heron, *British Medical Journal*, January 17, 1883; *Lancet*, February 3, 1883.

¹⁵ Smith, *British Medical Journal*, January 20, 1883.

¹⁶ Pfeiffer, *Berliner klin. Woch.*, No. 3, 1883.

¹⁷ Babès, *Société d'Anat.*, Paris, January 26, 1883.

¹⁸ Crämer, *Erlanger Phys. Med. Sitzb.*, December 11, 1882.

¹⁹ Menche, *Verein für Natur- und Heilkunde am January 22, 1883.*

²⁰ Fränkel, *Berliner klin. Woch.*, No. 4, 1883.

²¹ Dreschfeld, *British Medical Journal*, February 17, 1883.

bacilli in the secretions covering laryngeal ulcers in fifteen out of sixteen cases. Lewin confirms this, but Guttman was unable to do so in two cases.

Ziehl¹ has obtained positive results in seventy-three cases of undoubted phthisis; he found no bacilli in thirty-four cases of other lung disease. He thinks it more likely that there is no other "fungous-form" in nature to be stained thus, than that the tubercle-bacillus is the only one which is stained slowly in fuchsine and methylene blue. He considers the observation of the bacillus a certain means of diagnosis of the tuberculous process and a method of differentiation from other forms of disease; but their absence must not be considered as excluding tuberculosis. He speaks with especial certainty upon the prognostic value of the numbers of the bacilli in the excretions.

Rosenstein² found the bacillus in the urine of a patient with symptoms of tuberculous disease of the epididymis, the lungs being perfectly free. Lichtheim detected the bacillus, post mortem, in the contents of the pelvis of the kidney in a case of renal tuberculosis.

West's³ conclusions, after the examination of fifty cases of phthisis, are: (1.) That bacilli are found in all cases of phthisis with excavations, varying in number with the rapidity of the destructive process. (2.) That their arrangement in groups and masses indicates a greater amount of destruction of the lung tissue, unless the isolated bacilli are in great numbers. (3.) That there is no variation in the size of the bacilli. (4.) That the bacillus being evidence of the destruction of lung tissue may be confirmatory diagnostic evidence, although he has only found them after the physical signs were clear.

Williams⁴ found bacilli in 106 out of 109 cases of phthisis. Of the remaining three, in one but one examination was made, in another the excretion seemed to be purely bronchial, and in the third the slides were spoiled and he could get no more. He considers it hardly justifiable to draw any conclusions from the activity of the disease and the number of the bacilli, although as a rule they are few in the cases in which the disease is quiescent.

Dreschfeld⁵ found bacilli in varying numbers in forty-six cases of positive lung tuberculosis, in two or three doubtful cases, and none in eight non-tuberculous lung affections. He considers them of diagnostic but not of prognostic value.

Dettweiler and Meissen,⁶ after the examination of eighty-seven cases of phthisis, conclude that the number of the bacilli in the sputum has no bearing upon the prognosis. An observation which they have confirmed by a series of parallel records, clinical and of the number of the bacilli in the sputum.

Spina⁷ asserts that there are other bacilli with the same staining reaction as the tubercle-bacillus, and that he can find no other means of differentiation; that he could not find Koch's bacillus in tuberculous organs that had not been for a certain time exposed to the air; and that Koch's results are inconclusive, on the ground of too few experiments.

Immediately after Spina's work was published,

Koch's⁸ reply to his critics appeared. His article is characterized by vigor and by an evident security in the position he took at the start upon the merits of his discovery.

He first turns his attention to America, and merely mentions Cutter,⁹ who considers the bacillus to be "embryonal forms of mycoderma aceti." Of Rollin Gregg,¹⁰ who suggests that the bacillus may be only fibrine filaments, Koch says he seems to have considered that microscopical investigations would be superfluous for the establishment of his views. Schmidt¹¹ is advised to get good colors and learn how to use them before announcing fat crystals as bacilli. Formad¹² is told to become sufficiently expert not to let his animals die of tuberculosis when inoculated with wood, glass, metal, etc. Sternberg's¹³ failure to find the bacillus puts him out of court.

Then, turning to Germany, he remarks that "if one thinks that Germany cannot bring forth such blossoms of tubercle literature as these he is much mistaken." He says that Beneke¹⁴ must have found fat crystals and not bacilli in the blood of healthy men; that Crämer's twenty cases of bacilli in the stools of healthy men have been contradicted by Menche¹⁵ and Gaffky's¹⁶ experiments, and that they were not identified with the tubercle-bacillus, although they were stained after Ehrlich's method. Balogh¹⁷ found bacilli in Berlin mud, which Koch did not succeed in doing. Koch, moreover, denies any value to Balogh's inoculation experiments, because no sufficient precautions for the exclusion of the tubercle-bacillus were taken. Schottelius¹⁸ produced anatomical tuberculosis in dogs by causing them to inhale masses of finely-pulverized non-tuberculous matter. Koch says that the anatomical appearances are not the criterion of what is tuberculous, and that Bertheau and Weigart have completely contradicted him. Dettweiler,⁶ discriminating between phthisis and general tuberculosis, attempts to show that the tubercle-bacillus is the accompaniment and not the cause of tuberculosis. Koch thinks he would change his mind if he knew more about the pathology of tuberculosis. Koch¹⁸ then turns his attention to Spina, and in summing up a criticism of his work — after leaving exposed the fallacy of his reasoning — concludes by saying: "All his work shows that Spina does not know enough to observe bacteria microscopically, nor to cultivate nor to inoculate them. His work will have no influence upon the discovery of the tubercle-bacillus."

Since Koch's article in March observations have been published by Demme,¹⁹ who thinks he can confirm Lichtheim's observations as to the bacilli in acute military tuberculosis. He considers it probable that ulceration is necessary before the bacilli can be seen in the excretions. As an instance of probable infection he relates the case of a child which was put out to nurse in a family, and whose foster-father died of acute phthisis. The child had not the slightest hereditary taint of phthisis or of syphilis, and was infected through

⁸ Koch, Deutsche med. Wochenschrift, No. 10, 1883.

⁹ Cutter, American Medical Weekly, 1882.

¹⁰ Gregg, in letter to Koch.

¹¹ Schmidt, Chicago Med. Journal and Examiner, December, 1882.

¹² Formad, Philadelphia Medical Times, November 18, 1882.

¹³ Sternberg, Medical News, No. 1, 1882.

¹⁴ Beneke, Die erste Ueberwinterung auf Nordenay, Norden, 1882.

¹⁵ Loc. cit.

¹⁶ Gaffky.

¹⁷ Balogh, Wiener med. Woch., No. 51, 1882.

¹⁸ Schottelius, Virchow's Archiv., Band xci., Heft 1.

¹⁹ Demme, Berlin. klin. Woch., No. 15, 1883.

¹ Ziehl, Deutsche med. Wochenschrift, No. 5, 1883.

² Rosenstein, Centralblatt für die Med. Wissenschaft., February 3, 1883.

³ West, London Pathological Society, February 6, 1883.

⁴ Williams, Medical Society of London, February 12, 1883.

⁵ Loc. cit.

⁶ Dettweiler und Meissen, Berlin. klin. Woch., Nos. 7 and 8, 1883.

⁷ Spina, Studien über Tuberkulose, Wien., 1883.

the nasal mucous membrane. After suffering from ulcerative ozæna it developed tubercular meningitis, and died. Tubercle-bacilli were found in the ulcerated and non-ulcerated pituitary membrane.

Purser¹ quotes a case in which the bacilli were discovered in the sputum five weeks before the clinical signs showed any disease of the lungs.

Prudden² found bacilli in forty-six out of fifty-eight cases in simple sputum preparations, and in thirty-nine out of forty-two of sections. He thinks it is evident that in nearly every case of tuberculosis there are many miliary tubercles of all forms, and in many cases much tuberculous tissue from which the bacilli seem to be entirely absent, which may perhaps be explained by their not staining well after life is gone or going, and perhaps by their having disappeared from tubercle which has come to a stand-still.

The longest and clearest work upon the subject of the tubercle-bacillus yet published is that by Mr. W. Watson Cheyne.³ As a preliminary to his work this gentleman visited the laboratories of Toussaint at Toulouse, and of Koch at Berlin, and observed the methods of work at both places, carrying away material for subsequent experiment and examination.

In his experiments as to the inoculability of tuberculosis he has exercised the greatest possible care to prevent contamination of instruments and hands, and has kept the animals experimented upon under the very best hygienic conditions, this latter a precaution that has not always been taken.

In his inoculation experiments with non-tuberculous material he obtained negative results in every case. He explains the contradictory results of former observers by, first, the mistaking of cheesy masses, not tubercular, for tubercle where a microscopic examination was not made; and, second, by the fact that even where a microscopic examination was made the accuracy of the diagnosis would depend very greatly upon the methods of staining employed, and the views which the observer held as to what constituted a tubercle. It must be remembered also with regard to the early experiments in this direction that the danger of mediate inoculation was not recognized, and that therefore the channels for the possible introduction of specific micro-organisms were left unguarded, as the precautions necessary for the thorough disinfection of instruments, etc., had not yet been made out. He failed to obtain tubercle with the material obtained from Toussaint, and explains the latter's results by the growth of tubercle-bacilli in his culture-fluids and their introduction during inoculation. The latter occurrence is rendered more probable because Toussaint trusts so much to disinfection by carbolic acid, which, although effectual against ordinary micro-organisms, has been shown to have no effect upon the spores of other bacilli unless it acts for a long time. The tubercle-bacillus apparently produces spores, and there is no reason to suppose that these are less resistant than those of bacillus anthracis and other bacilli.

In the researches of Klebs and Schüller a pure cultivation was not obtained, nor were the cultivations carried beyond the third generation; nor was Schüller always successful in producing tuberculosis by the injection of his cultivations. Not even the best microscopists and those who have done most with micro-

organisms (Koch, Weigert, etc.,) have been able to find the micrococci which Schüller declares he has seen in artificial tuberculosis. Cheyne has found micrococci only twice, and neither time in tubercle.

The difference between the results of previous researches and Koch's is that his are much the more definite. He, like others, cultivates micro-organisms from tubercle, but now it is no longer the fact that he only sometimes succeeds in causing tuberculosis, and that the tubercle thus produced occurs as slowly or more slowly than after the inoculation of tuberculous material. The result of the inoculation of his cultivations is certain, and more rapid in its commencement than after the inoculation of tuberculous matter.

As a result of all his work Cheyne comes decidedly to the conclusion that the tubercle-bacillus is the cause of tuberculosis, and that scrofulous glands, degenerated (strumous) synovial membranes of joints, phthisical lungs, in short, all those materials obtained from man, which, inoculated into animals, produce acute tuberculosis, contain in them bodies (bacilli) which, if they entered the circulation in sufficient numbers, would give rise to acute tuberculosis. It has been demonstrated by several observers that probably in all cases of acute tuberculosis a place can be found where these bacilli get into the circulation.

Cheyne considers the bacilli to be developed in the first instance in epithelioid cells, and that in the lung these cells are derived from the alveoli. He thinks that giant cells are epithelioid cells which have grown rapidly, apparently as the result of the presence of bacilli in them. He thinks that the structural definition of a tubercle must run as follows:—

"A nodule, composed of a central mass, consisting in the main of epithelioid cells, or in its place a cheesy mass, surrounded by more or less inflammatory tissue, with or without the presence of giant cells. The absolute diagnostic mark is the presence of the tubercle bacillus. It is not, however, always necessary for a tubercle to be a nodule. If there are plenty of epithelial cells or if it occurs when there are no pouches—as there are in the lung—it may be diffuse."

Cheyne then discusses the facts of the varying numbers of the bacilli in phthisis, and draws the conclusions that according to the number and rapidity of growth of the bacilli we have fibroid phthisis or caseous pneumonia. On this basis can also be explained the difference in the effects produced by these organisms in man and rodents. Rodents which are inoculated subcutaneously always develop general acute tuberculosis, which is extremely rare in man when compared with the frequency of pulmonary tubercle, because in man the bacilli are not inoculated, but are received into the bronchial tubes by inhalation; their entrance into the circulation is prevented in the first place by the inflammatory changes which occur around the alveoli in which the bacilli grow. If man were inoculated as rodents are analogy makes it probable that acute tuberculosis would be developed.

The papers which have appeared since this publication are few, but of great importance.

Ransome⁴ has shown bacilli exhaled by a patient suffering from phthisis. He obtained them by condensing the vapor of the breath in a large glass globe surrounded by ice and salt, and stained them by Gibbs's⁵ method.

¹ Purser, Dublin Medical Journal, March, 1883.

² Prudden, New York Medical Record, April 14, 1883.

³ Cheyne, Practitioner, April, 1883.

⁴ Ransome, British Medical Journal, April, 14, 1883.

⁵ Gibbs's Method, British Medical Journal, October 14, 1882.

Cornil¹ studied the bacillus in tuberculous granulations as being the most simple lesions. He found generally in the centre of a tuberculous mass a vessel obliterated by fibrine, and bacilli in the centre of this; they were usually present also in the walls of this vessel and near by in varying numbers. He found that the number and dissemination of the bacilli varies very greatly, and could not find them at all in one case of tubercular meningitis. He found them in the spaces between the epithelial cells (lymph spaces of Ranvier), and in the connective tissue, and in the protoplasm about the nuclei of the embryonal cells which form tubercle.

Ballagi² concludes from his investigations that (1) Koch's bacillus can be separated from other forms of bacilli. (2.) A differential diagnosis from all other organisms can be reached by their staining reaction (Ehrlich's), and they can be thus separated in the tissue from putrefactive and disease germs (as the bacillus of leprosy). (3.) Putrefactive and other bacteria cannot be isolated by any known special staining method. (4.) The tubercle-bacilli do not occur with regularity in the sputum of persons in the first stages of phthisis (apex catarrh, hæmoptysis). (5.) In the sputum from patients in the advanced or fibroid stages the bacilli can always be found, especially in the form known as galloping consumption, although in no case do their numbers correspond invariably with the height of the fever or the stage of the destructive process. (6.) The tubercle-bacilli can be found in tuberculous organs when the process is not very old (*chronisch*). (7.) There are no bacilli in the sputum of non-phthisical patients. (8.) Their repeated occurrence is conclusive of the diagnosis. Their absence, however, does not prove the absence of a tuberculous process. (9.) Their number and distribution is of no prognostic value.

Fränzel³ has now observed three hundred and eighty cases of phthisis, and followed them up for months. He has examined also eighty cases of other lung disease, and always with negative results. In every one of the cases of phthisis he found bacilli in the sputum, and was often able to make a diagnosis by their presence, when the physical signs were negative — a diagnosis which was invariably confirmed by the further progress of the disease. In five cases which progressed with the picture of phthisis, no tubercle-bacilli were found, and further observation showed that none of them were cases of "cheesy infectious phthisis" (which was confirmed in three by post-mortem examination.) These further observations lead him to adhere to the first of the three laws which he enunciated in his former article, that the presence of the bacillus in the sputum determines the presence of tuberculosis. He also considers the quantity of bacilli — as determined after repeated examinations extending over a long time — as of great prognostic value. (He thinks that the examination should be extended over weeks or months, and should be repeated every day, or at least every second day, — with notes and comparisons, and the conclusions to be drawn from the general average.) He thinks that such a long series of observations will give us a more certain prognosis than even the physical signs. As a result of his further study of the subject, he wishes to modify slightly his second law, that is, "that wherever, after repeated

and careful examinations, no bacilli are found in the sputum there is no tuberculosis of the lung." This law would now read as follows: "When, after repeated and careful examinations no bacilli are found, — provided that sputum is present and comes from the lungs, — there is either no lung tuberculosis or else there are no cheesy softened foci emptying their contents into the bronchi."

(To be concluded.)

PHLYCTENULAR DISEASE OF THE EYES.⁴

BY OLIVER F. WADSWORTH, M. D., BOSTON.

THE affection to which I desire to call your attention to-day is characterized by the eruption of vesicles or pustules on the conjunctiva or cornea, and often attended by much apparent photophobia. It is one with which you are doubtless all more or less familiar under some of the many names given to it. Phlyctenular, pustular, scrofulous, lymphatic ophthalmia, conjunctivitis or keratitis; herpes or eczema of conjunctiva or cornea; fascicular keratitis; ulcer of the cornea, — such are some of the designations it has received.

The extended statistics collected by Cohn show that affections of the conjunctiva and cornea make up half the sum of eye diseases. Horner found the same to be true as regards children alone, with this difference, that whereas when all ages are considered, the conjunctival affections out-number much those of the cornea, with children the proportion is reversed; in them the cornea being implicated in 27.2 per cent., the conjunctiva in 21.7 per cent. of all cases. Moreover, according to Horner, phlyctenular conjunctivitis and keratitis comprise more than half of the disease of these membranes in the child. Arlt also says this is without question the most frequent of inflammations of the eye.

The very frequency of its occurrence makes its discussion appropriate before an assemblage of general practitioners. But its frequency is by no means the greatest of its claims to our interest. Its habitual obstinacy; its tendency to relapse or recur on the least provocation; the variations in form which it manifests; the fact that its appearance is of itself alone evidence, almost invariably, if not wholly without exception, of some deterioration or imperfection of the general health; and, finally, the frequent permanent impairment and occasional destruction of sight that it causes, are sufficient reasons for its careful consideration and study. According to Birch-Hirschfeld, six per cent. of the inmates of the blind asylums of Saxony lost their sight from this disease. Such a percentage is undoubtedly higher than would be found in this country. The number made blind by it bears, however, but a small proportion to the number of those whose sight, in one or both eyes, is more or less seriously and irretrievably injured.

While the vast majority of those afflicted are young children, adults are not wholly exempt, though with them the disease is comparatively rare. In my experience, also, the course is usually mild in adults, even if sometimes prolonged. It is in children chiefly that severe forms are seen and disastrous effects produced.

Unfortunately, by the laity the malady is very gen-

¹ Cornil, *Gazette Hebdomadaire*, April 27, 1883.

² Ballagi, *Wiener Med. Presse*, No. 17, 1883.

³ Fränzel, *Deutscher Med. Woch.*, No. 17, 1883.

⁴ Read at the Annual Meeting of the Massachusetts Medical Society, June 12, 1883, and recommended for publication by the Society.

erally looked upon as a troublesome but innocent accompaniment of teething, safe to take care of itself, and to pass away so soon as the irritation attendant on dentition has subsided, or as a sequela of measles or other exanthem, not specially requiring treatment. In consequence of this opinion the child is only too often made the subject of experiment with "household remedies," or allowed, even aided, to aggravate the disorder by following its own inclinations.

For the physician the understanding of the affection is made somewhat more difficult than need be by the prevailing habit in text-books of treating of eye diseases according to their anatomical situation. There is justification for this method of division, but as a result of it diseases of the conjunctiva and of the cornea are separated more or less widely, and where, as in the present instance, the disease is essentially the same whether its habitat be conjunctiva or cornea, the identity does not always appear with sufficient clearness. Other reasons for confusion are to be found in the multiplicity of titles, some of them implying a relationship with other diseases which does not exist, and in the fact that by some authors certain variations of the disease have been described under different names and as if distinct affections, by others different affections have been grouped under the same name.

The term herpes applied here is a misnomer. There is no evidence that the eruption has any such special connection with the sensitive nerves as is the case with herpes generally; the lesion of the cornea which may accompany herpes zoster is quite other in character than the phlyctenulæ, and the same is, usually at least, true when corneal or conjunctival affection is coincident with the ordinary herpes febrilis.

Eczema, on the other hand, is a frequent accompaniment of phlyctenulæ, as it is also a common affliction of young children. But a considerable proportion of the eczema observed in this connection is a secondary condition, due to irritation of the skin by overflow of tears and rubbing, or, on the lip and alæ nasi, by the catarrhal flow from the nostrils often present at the same time. The ocular changes do, indeed, resemble in some degree those found in eczema, yet there seem hardly grounds enough for adopting the title of eczema of the conjunctiva and cornea which Horner has proposed.

The main characteristic of the disease is the eruption of vesicles or pustules; these may be single or multiple, may vary in size from that of the head of a small pin to a diameter of several millimetres; the process may be exhausted with the eruption of one phlyctenula, or successive crops appear at irregular intervals; they may be situated on the conjunctiva, or cornea, or both, either successively or simultaneously, or may extend from one to the other. The duration of the individual efflorescence depends in the main upon its size and its situation; on the cornea the course is slower than on the vascular conjunctiva. The amount of irritation is far from being in definite relation to the severity or danger of the disease.

On the conjunctiva the eruption develops almost invariably in the near neighborhood of the cornea, and shows itself in two forms, the typical cases of which are sufficiently distinct in appearance. The more common is that of an isolated efflorescence. Beginning as a localized, elevated congestion, the centre soon becomes grayish-white or with a tinge of yellow, due to an agglomeration of lymphoid cells. The epithelial

surface is thrown off, the mass of cells beneath escapes, and there is left a depression with raised edges, which gradually flattens and is again covered by epithelium, while the congestion fades. Around the pustule both conjunctival and sub-conjunctival vessels partake in the congestion; toward the fornix, where the conjunctiva passes from globe to lid, the conjunctival congestion extends, diminishing in amount, but often increasing in breadth as it recedes from the focus of inflammation, so that the whole congested region assumes a fan shape.

Comparatively seldom, however, does the patient present himself with this typical form of congestion. Oftener, other pustules appear in various positions, simultaneously or before the first has healed, and the congested area thus becomes a wide one, with reddening of the lid conjunctiva also. If the individual pustule is small and superficial it may run through its whole course in a very few days. From this there is every gradation to the sluggish, somewhat deep ulceration, three or four millimetres in diameter, its base ragged, grayish, infiltrated, which may be a fortnight in healing over.

The other, less frequent, type consists in the almost simultaneous development of small, often very minute, phlyctenulæ, studded along a part or the whole of the limbus conjunctivæ, close to the corneal border. The attending congestion is more general, though greatest in intensity here also at the site of the eruption. The duration of the individual phlyctenulæ is short, but successive crops follow each other more or less rapidly, and extend the time indefinitely. Both forms begin with a sensation of burning or smarting as of a foreign body, more marked in the latter variety.

So long as the affection is confined to the conjunctiva alone the subjective symptoms are comparatively light, and the prognosis is positively favorable, even if the course be somewhat prolonged. Yet, until convalescence is fully established, the danger that the cornea too may be implicated is always threatening, and when that occurs the situation becomes more serious.

The manner in which the cornea becomes involved varies. A pustule may fall astride of the corneal edge, half in conjunctiva and half in cornea. Should the pustule be small it will generally heal readily and do no damage, but a large pustule in this position may give rise to a deep, funnel-shaped ulcer and to infiltration of the cornea beyond it. It is not so very uncommon for such an ulcer to extend in depth and cause perforation. The so-called fascicular keratitis commences as a pustule in this position. Here, instead of following the normal course, the infiltrated raised edge of the ulcer is pushed farther and farther into the cornea, the tissue breaking down and leaving a groove in the corneal substance behind it. At the same time a bundle of new-formed vessels extends from the conjunctiva, keeping pace in its growth with the progress of the infiltration, filling, or more than filling, the groove, while only a scarcely perceptible depression separates its corneal extremity from the gray, crescentic wall which precedes it. Usually the infiltration moves at first toward the centre of the cornea, but it generally swerves a little from a straight line. It may stop at any part of its course, or cross nearly to the conjunctiva on the opposite side. It never perforates, but the vessels disappear when the process is at an end, leaving a grayish cicatrix which is exceedingly persistent and characteristic.

Different again is the behavior where there are numerous small phlyctenulæ along the edge of the cornea, in the limbus. Then, if the condition persist some time, vesicle following vesicle, the irritation excites the growth of vessels from the edge into the cornea close beneath the epithelium. The progress of the vessels depends on the degree of the inflammation at the site of the efflorescence, and they extend farther where this is greatest, but the regularity with which a fringe of straight vessels is formed along the whole circumference of the cornea is sometimes very striking. With the subsidence of the inflammation in the limbus the corneal vascularity vanishes without leaving a trace. More than a superficial ulceration of the cornea, hardly extending deeper than the epithelial layer, I have never seen with this form, but an infiltration, leading to annular ulceration of serious amount, is described as a very rare complication.

If the cornea is affected independently the pustules show the same variation in their behavior as on the conjunctiva. There is the same difference in size and number, the same irregularity in the time of their successive appearance and in their duration. They may present themselves at any part without distinction. There seems to be no place of least resistance. Congestion about the pustule is, of course, wanting, but there is circumcorneal congestion, chiefly on the side nearest the inflammatory focus, and fading toward the fornix. A small pustule may be absorbed without coming to ulceration, but this is uncommon. From the superficial, grayish, subepithelial swelling, which, losing its covering, readily heals without leaving any sign, there is every degree to the extensive, deep, yellowish infiltration, causing deep destruction of the corneal tissue, even perforation, healing slowly, generally with the assistance of vessels growing out from the conjunctiva to its edge, and only by the formation of permanent cicatricial tissue. Through this tendency to the formation of vessels on the cornea there is sometimes, when the eruption has been repeated and long continued, a sort of pannus developed. Such a pannus mostly may be distinguished by the greater irregularity of its form and distribution from trachomatous pannus, which latter almost always starts from above, while its lower edge is approximately horizontal. Seldom, indeed, a sluggish, deep infiltration is complicated by hypopion and a low form of iritis. When it is borne in mind that, besides all the variations that have been indicated, a catarrhal conjunctivitis, with even considerable swelling of the membrane and mucous secretion, may be superadded, the possible diversity in the appearances presented is manifest.

The degree of injury to the eye as an organ of vision depends chiefly upon the situation of the lesion; a considerable opacity near the circumference of the cornea may be of little moment in this respect, yet without directly interfering with the entrance of light to the pupil it may still do harm by changing the proper curve of the cornea. The growth of vessels toward the ulceration is always a welcome manifestation, since the reparative process is hastened by their means, and it may be said in general that the perfection of recovery, the eventual freedom from opacity and changes of curvature, is the greater the nearer the ulcer is to the circumference and the shorter the time till healing is accomplished.

Of the subjective symptoms the most prominent and most troublesome is usually photophobia, so called.

With an isolated eruption on the conjunctiva or a single pustule on the cornea this symptom may be but little pronounced. As a rule, however, it is present, and especially if the efflorescences are numerous and repeated does it often reach such a degree as of itself to become almost a distinguishing characteristic of the disease. A child thus affected may never open its eyes even in a moderate light for days or weeks; it buries its head in its hands, in the pillow, or in the clothes of its attendant, resisting violently any attempt to turn its face toward the light. It seems sometimes as if there were an effort to drag all the features, forehead, cheeks, lips, to one common centre and heap them up over the eyes. To some extent in accord with the amount of the photophobia is the quantity of watery secretion poured out, which, by keeping the lids continually moistened, causes excoriations and increases the irritation. Yet it would be a mistake to suppose that the severity of the ocular affection is to be accurately gauged by the photophobia. Rarely, indeed, where this is pronounced, is the conjunctiva alone involved; there may, however, be but few pustules on the cornea and those small and near the periphery. Precisely the worst cases, those with large, sluggish infiltration, extending deeply and causing large loss of substance (dense permanent cicatrices), or perforation with its consequences, have this symptom usually but little marked.

The title scrofulous ophthalmia, though it affirms too much, yet indicates rightly the general direction in which the cause of the disease is to be sought. Not that all individuals afflicted are scrofulous, even when the most extended application is allowed to the term; many are so, and it is in such that the most serious and persistent cases are to be found, notably the sluggish form, as well as those with great blepharospasm. But a condition of health below the norm, which carries with it an impaired power of resistance to harmful influences, is always present. Exposure to rapid changes of temperature while imperfectly protected by clothing, followed by the onset or exacerbation of catarrhal inflammation of the mucous membrane of the nasal passages and fauces, too often coincides with the beginning or increase of the ocular symptoms to be denied an influence as a causative factor. The exanthemata—measles, scarlet fever—may be regarded as acting to depress the tone of the general system, while the congestion of the mucous membranes they cause, in which the conjunctiva shares, may well prepare the ground in some measure for the local affection.

To form a definite diagnosis we must obtain a view of the eye. In many cases this presents no special difficulty, in others the ingenuity and patience of the physician are taxed to the utmost if he wishes to avoid the use of forcible measures, and often in vain. If the child can be coaxed to open its eyes, this is, of course, preferable; occasionally the application of cold to the lids will relieve, temporarily at least, somewhat obstinate spasm. Yet whatever means are employed they will fail in many instances, and then the only resource is the elevator of Desmarres, the child being placed on its back, and its head fixed between the knees of the operator. The use of the fingers to raise the lids in such case can never be as effective, and must produce painful and sometimes dangerous pressure on the eye.

Inspection of the eye is also necessary for the formation of our prognosis. Hesitation or mistake as to this

may forfeit the confidence of the parents, a confidence often tried at the best by the persistency of the disease, and without which careful attention to the details of the treatment is scarcely to be expected. It is not to be forgotten, however, that only a provisional prognosis can be given from the condition at the moment, and the state of the general health is always to be taken into account. Although the central portion of the cornea may have escaped hitherto, no one can safely predict that it will not be affected later. Moreover, we do well to warn the parents before dismissing the case from treatment that, for several years, with any depreciation of the general health, the disease may reappear.

The treatment may be divided into general and local. What has been said of the ætiology indicates both the importance and direction of the general treatment. It should never be neglected even in the lightest cases. The diet should be easily digestible and nourishing, and attention to it in detail is always advisable; healthy action of the skin is to be promoted by frequent bathing; iron, malt, and cod-liver oil to be prescribed according to the case. The advantage of fresh air and light can hardly be overestimated. Even in the coldest weather it is usually better that the patient, properly clothed, should be taken out for a time daily, and this is the more needed the poorer are the hygienic surroundings at home.

Blepharospasm, so-called photophobia, is to be feared, not for itself, but for the prejudicial consequences it entails. The violent action of the orbicularis irritates still farther the already inflamed cornea, incites to friction and consequent excoriation of the skin of the lids with the result to increase the general nervous excitability, and prevents the free bodily movement so necessary, in children especially, for the preservation of health. In considering the means for its relief, we should constantly remember that the stimulus that excites it starts from the irritated terminations of the trigeminus, not from any hyperæsthesia of the retina. The indication then is to relieve the abnormal sensibility of these terminations. It is the irritation of the corneal nerves that chiefly excites the blepharospasm, and so far as they are concerned the local narcotic effect of atropine makes this our most reliable agent. The alleviating effect of even the first application is sometimes very great. A two-grain solution may be employed every other day, or two or three times daily, and if the case is seen early the spasm may thus be kept within bounds. But should the photophobic habit, if I may be allowed the expression, be once firmly established, relief is more difficult. When the lids are persistently kept closed it is commonly useless, or worse than useless, to intrust the application of this or any collyrium to the parents or attendants. In the efforts to force open the lids of a struggling child with the fingers, more harm is likely to be done than the atropine will counteract, and the increased flow of tears excited by the struggle will rapidly remove the small amount that has been instilled. The elevator is hardly safe in untrained hands. The application may, perhaps, be made when the child sleeps, but otherwise in such cases it is better left to the physician. Sometimes, however, reliance must be chiefly placed on less direct treatment. The benefit of cold applied to the lids has already been referred to. All friction of the lids must be prevented. Excoriations of the skin about the eyes may be washed with a solution of silver nitrate, or an ointment, containing ten grains of zinc oxide, or three or four grains each

of zinc oxide and white precipitate to the drachm, be applied. The same treatment may be employed for eczema of the upper lip and *alæ nasi*, or elsewhere about the face, if present. Irritants are harmful. Darkness only aggravates the symptom. Within doors the light should be moderate and even, and be increased as the condition improves, but sudden changes of light, producing, as they do even in a state of health, contraction of the orbicularis, are to be carefully avoided. In the open air a dark shade, large enough to protect both eyes, though only one be affected, and arranged to stand out free from them, with a veil or smoke-glasses if required, are of use. It is by attention to details that success is to be attained.

When the eruption is limited to the conjunctiva a simple collyrium of borax in water or camphor water is often all the local treatment needed. Calomel, dusted lightly upon the conjunctiva from a camel's hair pencil, every day or two, till congestion has disappeared, seems to have a good effect in preventing relapses. But it must be employed with precaution. It should be pure and dry, only a very thin film of it should be formed on the conjunctiva, and the lower fold should be inspected after a moment or two, that if any have collected there in a clump or thread it may be removed. The action of calomel was for a long time unknown; now it has been demonstrated that it is soluble, to a slight extent, in salt water, and it probably acts as a weak solution of bichloride. In the presence of iodine there is produced a biniodide of mercury, and it should, therefore, never be used when the patient is taking any preparation of iodine, else a troublesome eschar may be the result. Properly used it is painless, and I have myself never seen any ill effect from it.

In general, astringents are to be avoided, but when the condition is complicated with a catarrhal inflammation of the conjunctiva, mild collyria of alum, zinc, or silver nitrate are in place. Yet these should be employed cautiously and their action watched if any fresh eruption exists.

With an eruption on the cornea I rely, with most oculists, on the action of atropine. Its soothing influence has already been alluded to. The frequency of its application is to be governed in the main by its effect on the pupil, and it is to be continued till the ulceration is again covered by epithelium. Here, also, calomel is apparently of benefit, but is, in contradistinction to the conjunctival affection, only to be applied after epithelial regeneration is well under way. Yet I would make one exception to this last statement. In the fascicular form of keratitis it has seemed to me that calomel, applied somewhat freely during the progress of the band across the cornea, has sometimes checked its course. So erratic, however, is this variety, and the opportunity for studying it so comparatively infrequent, that I am willing to admit it may have been coincidence rather than effect that I observed. With the ointment of yellow oxide of mercury, much used in the same conditions as is calomel, my experience has been limited, and it has appeared to me at least less agreeable to the patient.

The sluggish, deep infiltration, whether at the edge of the cornea or more central, showing little or no tendency to the formation of vessels, demands, besides atropine, the application of hot fomentations, continued half an hour or an hour three or four times daily. These help to relieve the pain, sometimes considerable,

and invite the vascular outgrowth from the conjunctiva needed to furnish material for repair. Should perforation occur, pain usually ceases as by magic, and the reparative process begins. The subsequent care after perforation does not differ from that required in similar circumstances arising from other cause.

Many and various have been the remedies recommended to promote the absorption of corneal opacities left by this or other diseases. My own belief is that none of them are of special value, and that the opacities are best intrusted to nature to reduce, as she certainly will in part. Our task, after the immediate attack has passed, is to see to it that measures to improve and preserve the general health are continuously carried out and thus recurrence prevented.

RECENT PROGRESS IN DISEASES OF CHILDREN.

BY T. M. ROTCH, M. D.

ASTHMA DYSPLEPTICUM.¹

DR. OSKAR SILBERMANN, of Breslau, first published, in 1876, an article on the so-called dyspeptic asthma of children, and at the same time mentioned the reflex phenomena experimentally shown by Mayer and Privram to be produced by irritation of the stomach. Silbermann has lately had three more cases, which he reports as follows: (1.) A boy, thirteen months old, breast fed until the eleventh month, and always healthy, excepting that he had lately, for a short time, had diarrhoea, was seized with vomiting, great dyspnoea, the respirations being 70, and very rough, cyanosis of the face, pulse 160, small in character, cool extremities, and an anxious expression of face, apparently as if he was about to expire. The temperature was 37.6° C. The epigastrium was somewhat distended, and tender on pressure. Remedies for dyspepsia were given, and the child was perfectly well in two days. (2.) A girl, six months old, was taken sick with gastric symptoms, was very cyanotic, respirations 60 in the minute, pulse small, 120, temperature 36.9° C., repeated vomiting. Perfect recovery on the following day. (3.) A girl, eight years old, was seized with dyspeptic symptoms, and had a small, irregular pulse of 160; the epigastric region was distended and sensitive, the respirations were 28; twelve hours later the respirations were 60, and harsh in character; there was a high degree of dyspnoea, and great cyanosis; temperature 37.1° C. She recovered completely some hours afterwards.

The reflex gastric symptoms of slow pulse and increased blood pressure, experimentally produced by Mayer and Privram, are not altogether similar to the appearances observed in asthma dyspepticum. Traube and Henock supposed that a reflex irritation starting from the stomach caused a vaso-motor contraction in the arterioles, thus causing coldness of the extremities, weak pulse, and all the other appearances. Silbermann interprets the phenomena as primarily a paralysis of the vagus filaments, from which is developed a retarded action of the left ventricle with overfilling of the pulmonary circulation and the right heart, and secondarily overloading of the blood with carbonic acid, and the consequent dyspnoea and oedema of the lungs.

¹ Berlin. klin. Wochen., 23, 1882.

GROWTH AND WEIGHT OF INFANTS.²

Dr. Emil Pfeiffer, of Wiesbaden, has investigated the subject of infantile growth in reference especially to the figures of Fleischmann representing the increase in weight during the first year. Fleischmann's observations having led him to announce the rule that the average weight of sucklings at the end of their fifth month is equal to 550 grammes more than double their weight at birth, and at the end of the first year 900 grammes less than three times their birth weight; he has from this formula deduced a line, or, rather, curve of growth, by which he determines whether any individual infant is normal or abnormal in development. Pfeiffer, although as yet he has not established any rule of his own, warns us that Fleischmann's deductions are probably unsound both in actual figures and on physiological principles, and considers that Fleischmann's results have already been greatly modified by the growth curves collected by Mech, and that the figures of Bouchaud are more correct, although more complicated, Fleischmann's formula being especially noticeable for its simplicity.

Pfeiffer illustrates the practical weakness of the Fleischmann formula by two cases: (1.) An infant, weighing at birth 5000 grammes, was found at the end of the twenty-second week to weigh 9100 grammes, which was much less than the 550 grammes more than double his initial weight. This same infant when one year and ten days old weighed 12,790 grammes, which again was far more than the 900 grammes less of the formula, and yet no one could say that this child was poorly developed, for at the end of its first year it weighed 25 pounds, had its eight incisors and four molars, and was strong and well. (2.) A female infant, born in the thirty-third week, with a birth weight of 2225 grammes, weighed at the end of the twenty-second week 5125 grammes, which was 675 grammes rather than the 550 grammes of the formula, while at the end of the first year it weighed 8430 grammes, which was 1755 grammes more than three times the original weight rather than the 900 grammes less of the formula, yet this infant was not very strong, and in fact was considered rather small and weakly.

The Fleischmann formula would have made the first infant attain the enormous weight of 14,100 grammes at the end of its first year, while the second infant would have weighed only 5575 grammes, the usual weight of an infant three and a half months old. Pfeiffer considers that much more reliable results can be obtained by reckoning from the absolute amount of increase without regard to the initial weight, and from a growth curve constructed in this manner, estimating the deviations from the normal average weight which may arise in any individual instance. This method, already adopted by Vierordt and Bouchaud, is nearer perfection for the general run of cases in that it is also sufficient for determining the weight of both very heavy and very light children. Pfeiffer then states that from his observations on nursing women he has found that during the first five months the secretion of milk amounts to not, or if any, very little over 1000 to 1100 grammes a day, and that these figures representing the total amount which the child can get from the breast, the simply breast-fed child, whether heavy or light, takes the same amount of nourishment during these first five months. It is therefore clear that the

² Jahrbuch. für Kinderheilk., Band xix., Heft 2.

very large child cannot increase in weight more than the child of medium weight, and that its increase is not proportional to its initial weight, but to the amount of nourishment which it imbibes. Small, puny infants may possibly not take the whole amount of nourishment provided for them. On the other hand the case is altered in the second half of the first year, a time when breast-fed children are frequently given some additional food, for now the larger and probably stronger infant will usually take a larger amount of food than the smaller infant, and will thus have a greater opportunity for gaining in weight, and this fact will make the increase in the second half of the first year greater than Fleischmann allows for, and thus prove to be a disturbing element in his formula. Pfeiffer has obtained the following results from a number of children with widely different initial weights, and all of them fed on the breast during the first five months, and later with cow's milk and other food in connection with the breast milk. The average weight for each month has been reckoned, and at the same time it was found that the average initial weight was 3416 grammes:—

Month.	Monthly Increase.	Increase from Birth to end of First Month.	Weight at end of First Month.
1	875	875	8791
2	886	1261	4677
3	754	2015	5481
4	748	2758	6174
5	598	3359	6772
6	902	3958	7874
7	477	4435	7851
8	591	5028	8442
9	557	5580	9096
10	576	6256	9672
11	315	6571	9987
12	217	6788	12,004

A curve constructed from these figures is almost identical with that of Bouchaud.

PROPORTION OF THE BLOOD CORPUSCLES IN MEASLES.¹

Prof. R. Demme has made some observations on the increase and decrease of the red corpuscles of the blood in twenty cases of measles, and the relation between the red and white corpuscles. He found that occasionally in the beginning of the fever stage there was a slight increase of the red corpuscles, while on the development of the eruption there was a decrease which lasted for twelve or forty-eight hours after the fever, so that the red corpuscles sank to half the normal number. After eight or ten days the number gradually increased with frequent variations. The spectroscope showed in the beginning an increase, and after the appearance of the eruption a decrease of the hæmoglobine. The decrease of the red blood corpuscles occurred also in a case of measles where there was an intense efflorescence, but no fever. An absolute increase of the white blood corpuscles was found in the course of the disease during the fever stage, and usually before its decline.

THYROID GLAND IN MEASLES.

In a number of cases there was an acute swelling of the thyroid gland, which retrograded spontaneously in ten cases, but in twelve cases was intractable until iodine was used. These swellings lasted in their acute

¹ Jahrbuch. für Kinderheilk., Band xix., Heft 2.

stage for from one and a half to three days, caused marked dyspnoea, and usually disappeared quickly. In one case there was an abscess formation, which on being opened was found to contain pus which was full of rod bacteria and micrococci. In this case the whole right lobe of the thyroid came away, but recovery took place.

GALL-STONES IN AN INFANT.²

Dr. A. D. Walker reports the case of an infant three months old, and healthy, who when it was one month old had an attack of icterus, and who, after some hours of restlessness and suffering, passed by the rectum, a purgative having been given, three gall-stones, the largest of which weighed two grammes.

HYDATID OF LIVER.³

Dr. A. M. Edge reports the case of a child four years old, and previously healthy, who while playing with another child was observed to complain of abdominal pain when his playfellow grasped him around the waist and lifted him up. On examination a fluctuating tumor was found as large as a small orange in the epigastrium, a little to the right of the median line, apparently attached to the liver, which was not enlarged. In a few weeks the tumor increased in size and became superficial so that a puncture was easily made, and thirteen drachms of clear liquid rich in chlorides was withdrawn; no hooklets were found. After the puncture the cyst entirely disappeared.

STERCORACEOUS VOMITING.⁴

Professor Rosenstein reports a remarkable case of faecal vomiting in a boy nine years of age. The child during a period of five weeks, from time to time, was attacked with spasmodic abdominal pains and loss of consciousness, the attack ending with the expulsion of faecal masses from the mouth. Between the attacks the child was apparently perfectly well. The scybala varied from one to three centimetres in length, and at times were still larger. Enemata caused a discharge from the mouth as well as the rectum. This faecal vomiting usually followed a severe attack of pain, but sometimes also occurred without pain, and there was generally though not always an accompanying rectal discharge. The attacks by degrees grew less frequent under the administration of enemata and large doses of bromide of potash. Professor Rosenstein supposed that under the influence of a neurosis which caused a kind of tetanus a temporary stricture was produced in the intestine, and from this point an upward and downward peristalsis took place.

SUDDEN DEATH IN INFANTS.⁵

M. F. Bontemps has written quite a valuable article on the various lesions which may cause sudden death in infants, his observations having been made principally at the morgue under the direction of Professor Brouardel, who holds the chair of Legal Medicine in the Faculty of Medicine in Paris. The author points out the fact that very little has been written on this subject, only one class of cases having been touched upon by Pibar-Dufeillay in 1861, in an article entitled *Etude sur la Mort Subite chez les Jeunes Enfants*, causée par

² British Med. Jour., 1112.

³ Lancet, ii., 18, 1881.

⁴ Berlin. klin. Wochens., 34, 1882.

⁵ De la Mort Subite chez les Jeunes Enfants. Thèse par M. F. Bontemps. 1882.

les Troubles du Système Nerveux. In speaking of sudden death the author states that he means those cases where there is a sudden cessation of life without mechanical or toxic influences in an apparently perfectly healthy child, or one whose disease shows no signs of an immediately fatal result. As to the frequency of sudden death at different ages M. Devergie out of forty cases found none to be infants; M. Tourdes out of eighty cases records four infants, the youngest of which was seven months; Dr. West found that out of 627 sudden deaths registered in 1854, 236 were under one year, and 36 were from one to five years old. The cases referred to by Bontemps were all under two years, and he divides the subject into four classes: I. Sudden death connected with the nervous system. II. Sudden death connected with the respiratory system. III. Sudden death connected with the circulatory system. IV. Sudden death connected with the abdominal organs. In Class I. cerebral congestion is first spoken of, the author claiming that as a cause it is seldom found, but as a frequent result from some other primary cause, such as spasm of the glottis. Passing shortly over cerebral anæmia, meningeal hæmorrhage is next referred to as being excessively rare, only one case being known of, that reported by Valleix, and in that other important lesions were also found at the autopsy. Cerebral hæmorrhage was rare, two cases only having been found, one, a puny child, dying in five minutes, and one, a healthy infant of three months, dying in half an hour, there being sudden convulsions in both cases.

A certain number of cases take place in epidemic cerebro-spinal meningitis; M. Tourdes has seen several infants die in a few hours of this disease, and cites one instance where an infant six weeks old died so quickly that it was supposed to have been poisoned with laudanum, but the autopsy showed characteristic pathological changes at the base of the brain and the upper part of the cord. Tubercular meningitis was found as a cause in several cases, that of M. Rohrer being especially noticeable, where a little girl was attacked in the middle of the day with violent headache and died in the evening in convulsions. Hydrocephalus and cerebral tumors are instanced as causes. Simple eclampsia from reflex causes were found to have proved fatal in a number of cases. Six interesting cases of sudden death from spasm of the glottis are reported. The author next speaks of sudden death connected with diseases of the respiratory system, and after referring to laryngitis stridulus as affording examples, reports sudden death in two cases of pleuritis where an autopsy was obtained. Two cases of tuberculosis of the lungs, with autopsy, are next reported. A number of interesting cases of sudden death occurring in the course of bronchitis suffocativa are recorded, and nine cases of death taking place in a few minutes during the spasm of pertussis.

In Class III., where sudden death connected with the circulatory system is spoken of, a number of sudden deaths from syncope are first referred to, and then deaths during endocarditis, pericarditis, and malformation of the heart. The author concludes his thesis with a description of a number of sudden deaths connected with the abdominal organs, especially from typhoid fever, intestinal parasites, peritonitis, and cholera infantum; also the following interesting case of hæmatemesis: An infant born at full term, of healthy parents, and apparently strong and vigorous,

vomited a considerable amount of blood twenty hours after birth, and suddenly died; the autopsy presented a number of ulcerations at the cardiac end of the stomach. Three cases from renal disease are also described, with the accompanying autopsies.

This thesis of Monsieur Bontemps is well worth the notice of the general practitioner, if it is only to direct his attention to the fact that in the very diseases which he has been in the habit of treating for years without the accident of sudden death arising, he is at any time liable to meet such a case and must be prepared for it.

Reports of Societies.

THE NINETEENTH ANNUAL MEETING OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

THE nineteenth annual meeting of the American Ophthalmological Society was held at the Kaaterskill House, Kaaterskill, on July 17th and 18th. Three long sessions were held, and many papers read before the Society and discussed. The meeting was called to order by the president, DR. H. D. NOYES, of New York. After reading of the records and reports by the secretary, DR. R. H. DERBY, of New York, and the appointment of committees, the Society proceeded at once to the consideration of the papers presented.

The first paper read was one by DR. H. DERBY, of Boston, on the

RESULTS OF THE EXAMINATION OF THE REFRACTION OF FOUR CONSECUTIVE CLASSES AT AMHERST COLLEGE.

The entire number entering and graduating were examined, but for the purposes of the paper only such were considered as completed the entire course. The results may be summarized as follows: Average age at entrance nineteen years; average age at graduation twenty-three years.

	Refraction at Entrance.	At Graduation.
Manifest hypermetropia	89	47
Myopia	90	120
Emmetropia	125	87
	254	254

The myopia in 32 cases remained stationary. In 58 cases the myopia increased.

Average myopia at entrance 1.8 dioptic.

Average myopia at graduation 2.4 dioptic.

Average increase 0.6 dioptic.

Of the 125 emmetropic cases at entrance 86, or 68.8 per cent., remained emmetropic.

Ten, or 8 per cent., developed manifest hypermetropia.

Twenty-nine, or 23.2 per cent., developed myopia.

Average amount of myopia developed nearly 1 dioptic.

Thirty-four per cent. of the entire number were myopic at entrance, and 47 per cent. at graduation.

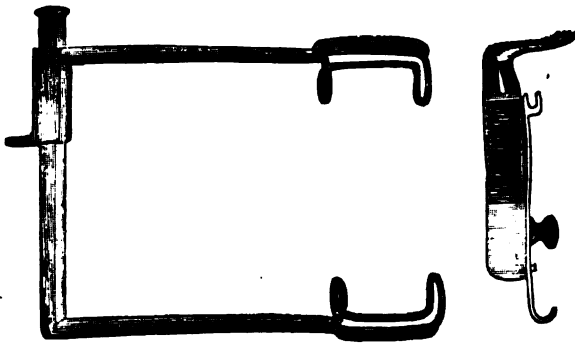
DR. R. MURDOCH, of Baltimore, exhibited to the Society and read a description of

A NEW COMBINATION OF INSTRUMENTS FOR USE IN THE EXTRACTION OF CATARACT,

among which was a new speculum, which absolutely prevents the patient from producing pressure upon the eye by any convulsive movement of lids while under ether during an operation. Such an accident may easily occur with the different forms of spring speculum in or

dinary use, either by the actual bending of the spring wire of which it is made, or by the slipping of the set-screw. The novelty of the instrument consists of two rigid arms, the lower attached firmly to a square, rigid, upright bar. On this upright bar the upper arm slides by means of a square sheath. When the arms are separated if any disturbance of the parallelism of the bar and its sheath occurs the friction is sufficient to prevent the approximation of the arms. So the more pressure applied at the extremities of the arms the firmer are they held apart. They are easily moved by pressure on the projection of the sliding arm at the bar end, as that immediately restores the parallelism of the square bar and its sheath.

Dr. Murdoch also exhibited an ophthalmostat, as figured, which, having been attached to the conjunctiva of the lower part of the globe, is easily affixed to the speculum, and so holds the eye immovable.



DR. H. S. SCHELL, of Philadelphia, read a paper on a case of

TUBERCLE OF THE IRIS.

When first seen the child had the iris bound down, and pupil would not dilate with atropine; apparently a case of plastic iritis. Family history of phthisis. Three weeks later returned with immovable pupil, with a small yellowish nodule, somewhat pinkish in color, upon the iris. Tension of eye increased. Painful. Had tubercular abscesses in other parts. Eye was enucleated, and a tuberculous mass found in ciliary region and in front of iris. Subsequent death of patient.

DR. O. F. WADSWORTH, of Boston, read a paper on a similar case. When first seen child had apparently kerato-iritis. A yellow reflex from pupil. Good family history. Child appeared to be well. Eventually had pain, with considerable injection of circum-corneal vessels. On iris a yellow growth with vessels running over it. The eye was enucleated, and the mass found to extend through the iris into the ciliary region. The vitreous was replaced by a serous fluid. The tumor was examined microscopically, and found to contain tubercles. The tubercle bacillus was also found. Child continued well five months; it was then attacked by severe headache which lasted six weeks, when the child died.

DR. S. F. MCFARLAND read a paper on a Personal Experience with Prismatic Glasses.

DR. O. F. WADSWORTH, of Boston, read a paper explaining the physical cause of the convexity or concavity of surfaces as seen through prisms.

DR. J. A. SPALDING, of Portland, Me., read a paper on Sympathetic Neuro-Retinitis.

DR. D. WEBSTER gave an Analysis of Thirty-Five Cases of Cataract Extraction.

DR. W. W. SEELY, of Cincinnati, read an article on Ocular Therapeutics.

DR. W. F. MITTENDORF read a paper on the

TREATMENT OF DETACHMENT OF THE RETINA FROM SEROUS EFFUSION* OR RETINAL HÆMORRHAGE.

He advocated a systematic and persistent attempt at the reduction of the serous effusion. To accomplish this he keeps his patient in a supine position, with both eyes closed, in a darkened room. Atropine should be used to destroy accommodative effort. No myotic. An elastic rubber bandage over the eye to induce absorption. He would hasten absorption also by the continued use of jaborandi and pilocarpine. It is his custom to give a hypodermic injection of from one sixth to one eighth grain of pilocarpine each morning; also to make a tea of jaborandi leaves with a strength of from forty grains to a drachm in twelve ounces of water. Of this he administers a teaspoonful dose every hour. This treatment, after the first disagreeable symptoms are over, continues as a state of merely comfortable diaphoresis, and is prolonged for twenty days or more. Specific treatment should be given if necessary.

CASES. Mr. S., forty years old. Myopic, which condition is hereditary. Left eye has complete cataract and is amaurotic, but has had no trouble from it for years. Two nights ago had a difficult motion of the bowels. Right eye suddenly became dim, and objects seemed red and green. Dimness of vision has increased since, and when seen tension was diminished and vitreous muddy, with total detachment of the retina. Amount of vision left very slight. Placed under treatment as above. At night patient distinguishes for the first time that the "doctor wears a beard."

Vision continued to improve, and at the end of three weeks has $\frac{1}{200}$ vision, with a fundus slightly blurred. One year later still had $\frac{1}{200}$ vision.

Mr. D., sixty years old, American. Left eye lost, but in good condition. Had a severe blow on right eye, and four weeks later, while at work in the field, became rapidly blind, with difficulty getting to the house. Was examined by a competent surgeon, and told that he had detachment of the retina. Six months later has almost entire detachment, but with perception of light in each direction. At the end of three weeks' treatment had $\frac{3}{200}$ vision, with a good field. Remained the same at the end of six months.

Mr. T., thirty-nine years old, German. Vision of right eye has been failing for some time, with floating opacities in vitreous. Tension normal. Diagnosis: Specific choroiditis. Put on specific treatment without improvement. Three weeks later became suddenly blind in both eyes. Tension rather less than normal. Was placed under above treatment with the biniodide mixture. Vision at end of three weeks in right eye $\frac{2}{200}$, left eye $\frac{1}{200}$.

DR. W. S. LITTLE, of Philadelphia, read a report of two cases of

ECTOPIA LENTIS,

in which vision was improved by cylindrical glasses, which have been worn for a year with comfort.

DR. GEORGE T. STEVENS, of New York, read a paper advocating

THE USE OF NITROUS OXIDE GAS FOR MINOR OPHTHALMIC OPERATIONS.

DR. BULLER, of Montreal, in the discussion which followed, said that it had been used in Moorfields', London, but had been given up on account of the venous congestion and a certain amount of rigidity of the muscles.

DR. HEYL, of Philadelphia, read a paper upon Glaucoma, and DR. G. HAY, of Boston, a paper illustrated by diagrams upon the Astigmatic Pencil of Rays.

DR. KIPP, of Newark, N. J., exhibited a Sarcomatous Tumor of the Choroid with interesting clinical features.

DR. S. THEOBALD, of Baltimore, read a paper upon

THE TRITURATION OF THE CORTEX.

This is the name recently given by Förster, of Breslau, to a method of hastening a slowly forming cataract. The method is this: a preliminary iridectomy is done upward in the same manner as for the Graefe extraction, and then while the anterior chamber is empty a gentle rubbing motion is made over the surface of the lens with some blunt instrument applied to the exterior surface of the cornea, thus bruising the capsule of the lens.

CASE I. Lens had remained in same condition for two years. Operation done as above, using for the trituration the angle of a strabismus hook. Increased opacity followed accompanied by iritis, which also complicated the convalescence of the subsequent extraction of the cataract.

CASE II. Opacity of lens had remained the same for many months. Operation done as above, and although there was still some clear lens before operation the red reflex had entirely disappeared in three weeks.

In the discussion which followed, DR. GRUENING said he had performed the operation twice without any iritis. He had used the end of the handle of the strabismus hook. Said great care must be taken to confine the trituration to the area of the pupil, new and old. Had removed cataract one week after the operation in the first case, and in the second the lens was quite opaque in four days.

DR. MITTENDORF said he had operated four times. Was successful in three cases, and lost one eye by iridocyclitis.

DR. WADSWORTH said he had performed the operation once without effect as to the ripening of the cataract. Had some slight adhesions of the iris to lens capsule.

DR. NOYES, of New York, had done trituration of lens capsule ten times, and once had had iritis, which repeated itself after the cataract operation; the nine other cases were successful. The time required in his cases to bring the lens into suitable condition for extraction was from three weeks to two months. It was noticed that the opacities did not invariably appear upon the surface which had been subjected to the treatment. Swelling of the lens does not occur as in traumatic cataract. Two of his cases had slight iritis. Used a silver curette.

DR. H. KNAPP, of New York, read a paper on Retinal Thrombosis with Blindness resulting from Facial Erysipelas.

DR. W. H. CARMALT, of New Haven, Conn., presented a paper upon

CHANGE OF REFRACTION THE RESULT OF A BLOW.

CASE. Student, thirty years old, struck right eye on a bolt in falling. Remained quiet the balance of the day, and consulted the reader a few days later, complaining that he could not see distant objects with right eye through the glass he was in the habit of wearing, but, on the contrary, without his glass saw better than he had ever seen before. Upon investigation it was proved that he had, previous to his injury, a myopia of $\frac{1}{2}$ in his right eye, and of $\frac{1}{4}$ in his left eye. Subsequent to the injury in the left eye the myopia remained as before, but in the right eye the myopia was reduced to $\frac{1}{8}$. Upon examination it appeared that the cornea remained unchanged. There was no alteration of the length of the eyeball. The lens images were not noticeably changed, and it was the opinion of the writer that the change in the refraction was due to a dislocation of the lenticular fibres.

DR. E. W. BARTLETT, of Milwaukee, read a paper upon a further modification of the cataract operation.

DR. E. GRUENING, of New York, read a paper upon

BLEPHAROPLASTY BY THE ENGLISH METHOD (ALLOPLASTY).

The writer applied the name of the English method to that class of plastic operations in which a piece of skin was transplanted from one portion of the body to another without a pedicle.

CASE. Patient had face burned. The cheek, nose, and forehead covered with firm cicatricial tissue. The skin of the upper lid entirely lost except the free ciliary edge, which was drawn back and attached to the supra-orbital margin. The piece of skin to be transplanted was selected on the arm, over the most prominent portion of the biceps muscle. The arm was thoroughly scrubbed with a carbolic wash for several days before the operation. The border of the lid was freed from its attachments. After the bleeding of the surface to be covered had entirely ceased it was measured, and a piece of skin of equal size marked off on the arm. This was cut on two sides, and the flap lifted up, the skin and subcutaneous tissue were dissected up carefully from the subcutaneous fat (an assistant grasping each lobule as it was raised with a pair of forceps), then separated, and transferred quickly to its place. Care should be taken that the surfaces applied together should be free from all spots of circumscribed bleeding, clots, or fat lobules. In order to accomplish this the sutures should be in position at the margins of the space to be covered before the skin is transplanted. The transplantation was dressed with boracic acid, and covered with gold-beater skin. At the end of twelve days, when dressing was removed, the transplanted skin looked clean, and there was sensibility at the edges although anæsthetic in the centre. Continued to do well.

DR. WADSWORTH said that he had reported such a case, and concerning the matter of sutures said if they were simply placed through the epithelium they were sufficient to keep the flap flat, and that all others should be omitted.

DR. J. GREEN, of St. Louis, advocated instead of sutures bridges of cotton fibres tied down with non-contraction collodion.

Other papers were read by DR. R. J. McKAY, of Wilmington, Del., upon the Loss of an Eye after Cataract Operation from Sewer-Gas Poisoning, by DR. L.

Howe, of Buffalo, upon the Difficulties of the Diagnosis of Glioma, and by Dr. HOLT, of Portland, upon Cases of Chemosia Retinæ.

The meeting of the Society was an instructive and enjoyable one, and adjournment was made for one year to meet at the same place.

Medical and Surgical Journal.

THURSDAY, AUGUST 2, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

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NO. 4 PARK STREET, BOSTON, MASS.

PROFESSOR SEMMOLA ON THE PATHOGENY OF BRIGHT'S DISEASE.

It has been a matter of dispute whether albuminuria has its origin in the blood, in the blood-vessels, or in the kidneys. The more modern view that its point of departure is the blood, and not the renal organs, derives striking support from the researches and experiments of Professor Semmola, of Naples. These experiments were made chiefly on dogs, and the results are published in the reports of the Academy of Medicine, June 5, 1883. Professor Semmola, following a line of experimentation instituted by him in 1850, injects subcutaneously in dogs and other animals abnormal quantities of albumen,—albumen of egg, milk, blood-serum, albumino-peptones,—and speedily renders them albuminuric. The animals are killed at different periods of the experimentation. When sacrificed twenty-four hours after the injection and absorption of an excess of albumen the kidneys presented no lesion, although the urine contained in the bladder was highly albuminous. This was regarded as a temporary albuminuria, and which, left to itself, would soon get well.

When the animal was killed at the expiration of four days the kidneys were found hyperæmic. Sometimes veritable hæmorrhagic infarctions were noted, even when the quantity of albumen injected was no larger than six to seven grammes per kilogramme of the animal's weight. On the tenth day there was a migration of leucocytes around the internal aspect of the capsule; the epithelia of the tubuli had commenced to degenerate fatty; the kidney was in the first stage of inflammation.

On the fifteenth day there was found to be marked augmentation of the inflammation, which kept on spreading till about the twenty-fifth day the connective tissue fibres were seen to be involved, and the lesions of the first period of interstitial nephritis presented themselves. The animals shortly succumbed to the serious disorders produced by this experimentation.

It was sought to demonstrate by these experiments

that the injection of albumen of egg produced more speedy and more grave lesions in the renal organs than when milk or blood serum was used. The nearer the albuminous substance used was like normal blood albumen the less irritating it proved to the uriniferous tubules. Professor Semmola has observed that patients in Bright's disease not only lose albumen in their urine, but also in all their secretions. If you cause them to perspire their sweat is albuminous; if you give them pilocarpine their saliva contains albumen in excess. Even the bile of these patients is albuminous. As a result of his experiments this writer concludes that Bright's disease is not essentially a renal affection, but a vice of nutrition, slow in its march, and produced often, if not chiefly, by suppression of the cutaneous respiratory functions, and characterized by an alteration of the albuminoid substances contained in the blood.

This vice of nutrition prevents the albumens of the blood from being assimilable, and they are eliminated as foreign substances by all the emunctories of the economy. The kidney is only one of these emunctories. This organ, whose excretory function is of such preponderating importance, having a large proportion of this altered protein element to remove, readily suffers inflammation, but such inflammation and its consecutive degenerations are secondary to the blood vitiation and the profound constitutional disorder.

These views are to some extent in harmony with those propounded by Mahomed in the *Lancet* in 1879. According to Mahomed the blood condition which produces the high arterial pressure of Bright's disease is the primary condition, and is not secondary to deficient renal excretion, as held by most authorities.

Semmola, however, merits a place apart from all others who have treated of the pathogeny of Bright's disease. He was the first to formulate the doctrine, since ably defended by Gubler and Jaccoud, and summed up in the following propositions of Gubler: "Albuminuria always indicates a relative or absolute excess of albumen in the blood." "Albuminuria recognizes for its cause a deviation from the normal type of nutritive movements; this deviation consists in a perturbation, temporary or permanent, of the phenomena of assimilation or disassimilation of albuminoid matters." This second proposition has for its basis a series of experiments which demonstrate that the filtrability of albumen varies according as its molecular state is modified by injections into the blood of water, common salt, or albumen; by the injection of certain substances which alter directly the blood corpuscles. It is this doctrine of molecular modification which is essentially Semmola's contribution to the pathogeny of albuminuria.

Two of Semmola's experiments, communicated to Jaccoud, and published in the second volume of his *Pathologie Interne*, are so striking, and throw so much light on the question, that they are worthy of reproduction here. A robust man is suffering from Bright's disease *a frigore*. Semmola takes from him three ounces of blood, isolates the serum, and injects twelve grammes in the jugular of a dog, from which he had

previously abstracted twelve ounces of blood. The urine of the dog becomes albuminous in two hours.

Consequently the albumen contained in the serum of the patient was in a molecular state which rendered it unfit for assimilation. Thirty-five days later the patient is completely recovered. Semmola again takes from him a little blood and injects twelve grammes of the serum in the jugular of a dog; no trace of albumen is found in the animal's urine. Therefore, concludes this sagacious experimenter, the albumen of the first serum was, by the fact of the disease, altered and unassimilable, the albumen of the second serum has become, by virtue of the restoration to health of the patient, completely assimilable. Dogs are painted over their whole body with an impermeable varnish, and become albuminuric. The serum of these animals is injected in the jugular of other dogs, is not assimilable, and renders these animals temporarily albuminuric. The serum of healthy dogs, injected subcutaneously, or in the jugular, produces no such result. Jaccoud, from whom we borrow these last facts, remarks that these experiments do honor to the fertility of conception and scientific tact of the professor of Naples, and he regards them as demonstrating the reality of the molecular alterations of the albumen of the blood, and the influence of these modifications on the filtrability of the albuminoid substances by the renal membranes and their passage in the urine. In other words, it is in the blood that resides the first cause of the disease.¹

THE FINE ART OF SUBSTITUTION.

He is very unsophisticated who supposes that the progress of industrial chemistry has been chiefly in the direction of furnishing the staples of life in greater abundance and purity. The chemist of a manufacturing institution is now called upon to know much besides the ostensible composition of the alleged product. Organic chemistry offers unbounded possibilities, and he who cannot bring forth any requisite color, odor, and flavor from the petroleum products has missed his vocation. From the pinnacle of modern science the versatile synthesist looks back with scorn at the feeble efforts of the early days of adulteration, when the crude milkman had no paraphernalia but his pump, and the sugar dealer's chief reliance was placed upon shifting sand. If we may believe what we are told even the old reliable adulterants are adulterated. It appears evident that the coming "boom" in applied chemistry is to be in the direction of synthetical rather than of analytical work.

In the *Revue des deux Mondes* (June 15th) is an article by M. Cochin presenting a glimpse of what is done in this line in the French capital. A number of dishes are mentioned, with an exposition of what they actually contain. For the sake of variety we will begin at the other end, and give the actual articles which the consumer introduces into his digestive apparatus, with a glossary for the benefit of the unin-

tiated; and in so doing we promise to chasten our imagination, and to base our bills of fare chiefly on the data given by M. Cochin.

A luncheon, from the two points of view, then, might be as follows:—

Chemist's Menu.	Caterer's Menu.
Potato starch. Alum, ammonia, starch, etc. White fish, antiseptic salts, aniline, etc. Copper. Earth, potatoes, lycoperdons, etc. Margarine, gypsum, silicate of potash, sulphate of baryta, coloring matters, vegetable and mineral. Peanut and cotton-seed oil. Chicory, corn, carrots, caramel, saw-dust, horse liver. Glycerine, terra alba. Cabbage leaves, willow leaves, "butts," snuff, etc.	Tapioca soup. Bread. Fresh salmon. Green peas. Truffles. Butter. "Huile d'olive." Coffee. Confectionery. Havana cigars.

If the diner has a mind to assist digestion (that is, chemical reaction) by a glass of wine, he stands just one chance in ten of getting the juice of the grape, while if he tries his fortune on cognac unfavorable possibilities are immensely increased. If he calls a physician to relieve his indigestion, the mineral water ordered is likely to have sprung from no greater depth than the druggist's laboratory.

M. Cochin explains some of the difficulties standing in the way of the inspectors of adulterations (for such officials exist even in Paris). The manufacturers are actually opposed to the municipal inspectors. They say that it is an encroachment on the "liberties of the people." The public demand water colored with aniline, logwood, etc., and it is better for them than alcohol, *ergo*, they should have it. After reading the manufacturers' protest and defense one is almost ready to grant that adulteration is a blessing, and that "not to do it is wrong." Again, these aggrieved persons point out that the inspectors by feeding popular prejudices hurt trade. What though the chemists find in 3361 samples of wine 202 harmful, 2802 passable, but adulterated, and only 357 irreproachable? These wines are no worse than other people's, and the Italian and Spanish authorities are no such fools as to damage their export trade by the publication of such trivialities.

Yet it should be said more seriously, in closing, that M. Cochin points out that the figures returned by the municipal laboratory are not so bad as they seem. The articles are examined because they are suspected. The ten specimens of milk, of which seven were adulterated, probably do not represent the average of the milk sold in Paris. Of one hundred persons tried for theft only ten may be acquitted, but that does not prove that ninety per cent of the community are thieves.

— A female passenger in an English steamer from Copenhagen to London, recently died, it is said, from sea-sickness. She was found dead in her cabin, and a medical examination, of which the particulars are not at hand, reached the foregoing conclusion, as she had suffered greatly from the malady during the voyage.

¹ *Semaine Medicale*, June 7, 1883. Jaccoud, *Path. Interne*, t. ii. p. 486.

MEDICAL NOTES.

— A Western paper says: "Sam Weldon was shot last night in the rotunda by Henry Parsons." About the worst place a man can be shot, next to his heart, is in the rotunda. It invariably proves fatal. — *Norristown Herald*.

— In a recent issue of the JOURNAL reference was made to Dr. Mundé's advocacy of the immediate and forcible removal of the placenta after abortions. On the other hand, Dr. Hiram Von Sweringen (*Obstetric Gazette*, June, 1883), with equal emphasis, cautions us to let the placenta alone after abortion. In addition to his own experience he cites that of many others, who all unite in the recommendation that it is best to leave the removal to nature. Rest and ergot are his therapeutic resources. If there is hæmorrhage, hot water injections; if much pain, opium; if it does not come away in two or three days, carbolized injections; but *never* force.

— Prof. O. P. Hubbard, M. D., LL. D., after forty-seven years of service, has resigned the Chair of Chemistry in Dartmouth Medical College. He has been made by the trustees Professor Emeritus. Prof. Edwin J. Bartlett, M. D., is to give the instruction in chemistry during the present course of lectures.

Two thousand dollars from the estate of Hon. E. W. Stoughton, for the benefit of the Museum of Pathological Anatomy, has lately been received by the trustees.

— The United States consul at Stockholm states in one of his reports that on the government railways of Sweden there is generally a physician for every fifty-two kilometres of the line of road, and forty-four physicians altogether are thus employed upon the government roads. The private railways have a medical service closely resembling this system. One of the duties of the medical men is to examine all applicants for employment, and those found laboring under any physical disability such as to disqualify them for duty are rejected. Particular attention is paid to color-blindness and other defects of sight and hearing among those engaged in the movement of trains. They are also required to give their professional services to all those who are entitled to the same.

Relief is granted to the following: (1.) All those injured by accidents upon the lines. (2.) In ordinary sickness to regular employees and their families. (3.) To other employees while in actual service. (4.) To laborers in the shops, who have paid the same contribution as is required of those in the operating department, and also to their families. (5.) To extra laborers who fall sick or are injured while on duty. All the above are also entitled to medicines at the expense of the company while under medical treatment. No exception is made against those who have contracted injury or disease by their own fault, as in case of drunkenness, brawls, or venereal infection.

— A memorial tablet to the late Professor Skoda, of Vienna, was unveiled with some ceremony on the 13th inst. The tablet is placed on the house in which Skoda lived and died, and the municipality have also,

in honor of the illustrious physician, changed the name of the street to "Skoda-gasse." There was a large attendance of the university students on the occasion, and, after a few words from Professor v. Arlt, Professor Schrötter, a pupil and friend of Skoda, made the speech of the day, in which he alluded to Skoda's labors not only in the cause of medical science and education but in sanitation.

— A man obtained a verdict of \$1000 damages against the city of Elkhart, Ind., for injuries sustained by being thrown from a wagon on an unfinished street. He asserted that kidney disease ensued. The city put a life insurance agent on his track, who induced him to make application for a policy. In this application he has made affidavit that he was not afflicted with kidney disease and never had been. The court has granted the city a new trial, and the authorities are congratulating themselves over the success of their stratagem.

— In the course of a dispute between the Chicago dealers in lard, it has been incidentally disclosed that most American lard is adulterated from ten to one hundred per cent. with oleomargarine, stearine, cottonseed oil, tallow, and terra alba.

— The following was found posted on the bulletin board of the Harvard Medical School after the late examinations:—

Dr. Edes wishes to call the attention of the graduating class to the following facts which may be important to them and their patients. The doses referred to are not all from books which failed to receive 50 p. c.

The following are too large doses:—

Half a grain of morphia, } to begin with.
Ten drops of Fowler's solution, }
10 c. c. of fl. ext. of conium.
Calomel, 7 grammes.
 $\frac{1}{2}$ or $\frac{1}{4}$ grain of sulphate of atropia.
1 gramme of sulphate of copper.

Half a gramme of aloes every night in habitual constipation.

The following would make inconveniently large pills:—

One gramme of pil. aloes et myrrh. (No such pill made is official.)

390 grammes of sulphate of quinine and 130 grammes of confection of roses made into 6 pills.

Seven grammes of calomel and six centigrammes of blue mass.

Pepsine and bismuth should not be given together.

Lactopeptine is less efficient than pepsine.

A teaspoonful of lime-water in a tumbler of milk does neither good nor harm.

Calomel should not be used as an habitual cathartic (as was recommended in a good many books).

Mercury alone cannot conveniently be made an ingredient of an extemporaneous pill.

Blue pill does not contain calomel.

"Hydrarg. corrosivi mitis" does not need¹ calomel (or anything else).

An apothecary cannot reasonably be expected to go out and kill a pig to make fresh pepsine for each prescription that comes in.

— Dr. A. Beclère has made a careful study of the conditions attending the contagion of measles, from which we select his more important conclusions: Rubeola is contagious from the commencement of the period of invasion to the end of the stage of eruption, a period extending through from eight to ten days. The contagious principle is contained in the secretion of the respiratory mucous membrane, and it

¹ Could not make out whether the word is NEED or REACH.

still remains to be proved that it has anything to do with the cutaneous desquamation. Although this contagion is diffusible, it is so only to a slight extent, and soon loses its active properties, and does not remain in the rooms occupied by the sick. The period of incubation lasts from thirteen to fifteen days; no immunity is conferred by the presence of any other eruptive disease. — *Gaz. Méd. de Paris*, February 17, 1883, and *Practitioner*, June, 1883.

NEW YORK.

— Although the temperature was considerably lower during the week ending July 14th than in the preceding week, there was no decrease in the death-rate, which was doubtless due to the fact that the effects of the extreme heat of the previous week were still felt in the community. The number of deaths was 1110, against 1061 during the week ending July 7th. Of the total number, 435 resulted from diarrhoeal diseases, and of these, 408 were of children under five years of age. The whole number of deaths of children under five years was 660; under two years, 607; and under one year, 517. Forty-three deaths were credited to the direct effects of the heat, and sixteen persons were found drowned. The deaths in tenement houses numbered 682. The number of cases of contagious disease reported for the week were as follows: Typhoid fever, 14; typhus fever, 1; scarlet fever, 42; cerebro-spinal meningitis, 1; measles, 71; and diphtheria 18.

— At the last meeting of the Board of Health Dr. E. H. Janes, assistant sanitary superintendent, reported that during the week ending July 13th the summer auxiliary corps of inspection had visited 3727 houses and 17,221 families, treated 621 cases of sickness, and distributed 1651 sanitary circulars, and 555 tickets for the excursions of the St. John's Guild floating hospital. Dr. W. A. Ewing, executive officer of the Night Medical Service, reported that twenty patients were treated in June, and that in each case the city had paid the legal fee.

— Up to the middle of July the floating hospital of St. John's Guild had made ten excursions. The usual trip of the boat is down the lower bay and around to the Guild's seaside nursery at Cedar Grove, Staten Island, which is now completely filled with children suffering from disease and prostration resulting from the hot weather. The cost of each excursion is \$250, and not infrequently the entire expenses of the trip are paid by a single individual or business firm.

— During the week ending July 14th there were 278,520 visitors to the city's free baths, of whom 77,816 were women and young girls.

— The report of the Brooklyn Health Department for the quarter ending June 30th shows that 933 cases of contagious disease were reported during that time. Of scarlet fever there were reported 1056 cases and 169 deaths; diphtheria, 310 cases and 105 deaths; typhoid fever, 27 cases and 15 deaths; whooping-cough, 81 cases and 29 deaths; and small-pox, 5 cases and 1 death. The number of children excluded

from school on account of contagious diseases was 3009, and the number of persons vaccinated by the vaccinating corps, 2390; 126 wells were condemned, and 6181 pounds of bad meat; 9 physicians were registered under the Night Medical Service, and the number of calls attended in this service was 17.

— The Board of Police have amended the rule in the police manual referring to sick-leave, with a view to prevent officers from feigning sickness. As it now stands it requires that all who report themselves as injured or sick shall remain in the police stations until examined by a police surgeon, and that if they are pronounced unfit for duty they must go to their homes, and remain there until reported by the surgeon as able to go on patrol.

— The average small boy can stand a good deal, but James Nevins, eight years old, who recently lived at Clifton, Staten Island, tempted Providence a little too much on one of the hottest days of the season. While helping a liquor dealer to move in the morning he fell down stairs with a child's crib in his arms, and was so jarred that he went home and lay down for a time. After he got up he refreshed himself with about a pint of apple-jack from a demijohn which he found unattended by the owner, and then went swimming. Remaining in the hot sun until he was completely prostrated, he was carried home, and again put to bed, but having slept through the usual family dinner hour he went out, and made a hearty meal of green apples in a neighboring orchard. Then, after playing awhile, apparently in good health, he drank a large quantity of ice-water before retiring, and the next morning was found dead. The verdict of the coroner's jury was that death resulted from apoplexy caused by the excessive use of liquor, aggravated by sunstroke.

— The steamer City of Washington, of the Alexandre line, which put into Havana with a number of yellow fever cases on board on July 19th, arrived at Lower Quarantine on the 25th, where she was detained until the following day, when she was permitted to come up the bay as far as Robbin's Reef and discharge her cargo by means of lighters. Her captain stated that while at Vera Cruz the ship lay at anchor three or four miles from the town, but that the air of the harbor was so deadly that even under these circumstances the fever gained a foothold on the vessel. She left Vera Cruz on the 13th of July, and soon afterward the disease broke out among the crew. Before Havana was reached twenty-seven persons had been taken down with it, including Dr. Caro, the ship's surgeon. The latter and three of the crew, among whom were the butcher and baker, died during the voyage to Havana, and were buried at sea. The only passenger attacked was General Ord, who subsequently died; and he with eight of the crew were sent ashore at Havana and placed in the hospital there. The other patients were in a fair way of recovery by the time that port was reached, and there were no deaths afterwards. A new surgeon, as well as a number of new hands, were procured at Havana. When the City of Washington reached Lower Quarantine

the Health Officer found no sickness whatever on board and she was detained there merely on account of the rule which requires vessels from Havana to be quarantined until they have been five days out from that port. The mails were thoroughly fumigated before being sent up to the post office. The strictest vigilance is now being observed by the authorities in regard to all vessels from suspected ports, especially those of the Mediterranean, and it is believed that on account of the precautions taken there is no danger of cholera being introduced through the port of New York.

— Orders have recently been issued by the Health Officer to disinfect at quarantine the rags which are usually rolled around marble imported from Italy before permitting the vessels containing such cargoes to pass up to the city.

— On the 24th of July officers and inspectors of the State Board of Health served orders signed by the Governor on thirty-two firms and corporations along Newtown Creek from Hunter's Point, Long Island City, to Newtown, directing them to abate the nuisance of foul odors from their various manufacturing establishments, which have so long imperiled the health of the residents of the vicinity. The stench from these factories has been a subject of complaint from the citizens of Queen's County, as well as of New York, whither it is always wafted when the wind is easterly, for years, and Newtown Creek, by reason of the filth which has been allowed to drain into it, has been converted into a disease-breeding stream. Several other attempts have been made to abate the nuisances, but up to the present time have always proved ineffectual, principally because they have been made in such a public manner that the proprietors of the establishments have been forewarned, and thus have temporarily corrected many of the abuses. The proceedings this year were taken in a very quiet manner, and until the orders of the Governor were served upon them it is probable that not one of the firms charged with sustaining a public nuisance was aware that any investigation of their business was being made. On the 9th of June the attorney for the Long Island Railroad Company presented a petition from a few residents of Queen's County reciting the fact that Newtown Creek was lined with factories from which insufferably offensive stenches, which were dangerous to life, constantly arose, and asking for an abatement of these nuisances. The Governor, who was requested to keep the matter secret, at once referred it to the State Board of Health, which instead of beginning a public investigation, as in 1881, and thus putting the implicated parties on their guard, quietly sent a number of experts to the locality named to examine into the complaints. The result was that the inspectors, after nearly a month's labor, reported thirty-two establishments as public nuisances. The Board of Health made an elaborate report to the Governor recommending the abatement of these nuisances, and the Governor promptly signed the orders directing the offending companies either to remove their factories altogether or immediately take such measures as would render them inoffensive to the

community at large. Officers acting under the direction of the State Board of Health have been detailed to watch the nuisances, and see that the orders are executed in accordance with the provisions of the law; the penalty for non-compliance with which is a fine not to exceed \$1000, imprisonment for not more than one year, or both fine and imprisonment.

— Dr. Milligan Patchin, one of the summer corps of Board of Health physicians, having committed suicide by shooting himself in the head, Dr. Ellsworth E. Hunt has been appointed in his place.

Miscellany.

ON SOME RECENT ADVANCES IN THE SURGERY OF THE URINARY ORGANS.

BEING THE ADDRESS ON SURGERY DELIVERED BEFORE THE FIFTY-FIRST ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, AT LIVERPOOL, ON AUGUST 1, 1883.

BY REGINALD HARRISON, F. R. C. S.,
Surgeon to the Liverpool Royal Infirmary.

MR. HARRISON, by way of introduction, remarked that one advantage connected with the itinerant character of the meetings was that the different places suggest references to local celebrities of the past whose works cannot be thought over without advantage. He then referred to former surgeons of Liverpool.

In considering the position of surgery as detailed in Dr. Stokes's admirable address of last year, the thought naturally occurs that its diffusion is as remarkable as its progress. Compare, for example, the condition of surgery prior to the existence of our Association with its position as set forth in the columns of journals of the present day. In the former period departures from the ordinary routine of surgical procedure were confined to a few hands, and the benefits resulting from improved methods of treatment were shared in by a very limited number. Now no sooner is a method of treatment or an operation proved to be efficient than it is taken up and practiced wherever scientific surgery can reach; the peer is no better off than the peasant, and the cottage hospital rivals in its successes its more palatial representative.

The remainder of the address was devoted to more recent work in connection with the surgery of the urinary organs.

Commencing with the kidneys, Mr. Harrison considered it premature to formulate anything like precise rules, but from recent publications we may draw at least three conclusions of value:—

- (1.) That nephrectomy has been the means of saving many lives under circumstances where no other method of treatment was likely to be of service;
- (2.) That this operation has been practiced in cases where the probability of a successful termination appeared to be very remote; and
- (3.) That a method of effecting the removal of the organ different from that which was selected or a procedure less heroic might, in some instances, have tended to increase the chances of success.

In these directions then—in selecting cases for operation, in rejecting others as unsuitable, and in deter-

mining relatively to the case in question the best method of procedure—I take it that good work has yet to be done.

Till a few years since the removal of stone from the bladder by crushing had been conducted on the lines laid down by Civiale some half century ago. Though this method of proceeding has included amongst its advocates, past and present, surgeons of eminence, it cannot be said that as then practiced it was either gaining ground or confidence.

Whilst the surgical mind was thus to some extent in doubt as to the limits to which the crushing operation of stone might safely be pushed, two important communications followed rapidly upon each other. That both of them should have emanated from America merely indicates that the desire to advance the art of surgery is not limited to the old country, but is a natural outcome of advancing civilization and humanity.

The first of these papers was by Dr. Otis, of New York, who demonstrated beyond all reasonable doubt, and in a manner which had not previously been attempted, that the male urethra was capable of safely receiving far larger instruments than were generally employed. Following upon this, and probably influencing the views of the author, came Dr. Bigelow's paper on the removal of stone from the bladder by crushing and withdrawing it at a single operation; the latter communication clearly showing that the bladder was tolerant of much more prolonged manipulation than had previously been believed.

It appears to me that the originality of Bigelow in no way detracted from the importance of the work that had previously been done in this country and elsewhere, or compromised the acumen of those who were most interested in the progress of this department of surgery.

That Bigelow's method of procedure is a great step in advance—that it has extended the limits of lithotripsy and curtailed those of lithotomy—there cannot be the least doubt.

May not a more perfect knowledge of the physical and physiological laws which regulate the production of concretions in the human body result not only in enabling us more surely to prevent them, but to destroy them?

I cannot help thinking that if it could be shown to be even probable that the dogs, cats, rabbits, or frogs of the aforesaid districts were inconvenienced in a like manner with their owners, the matter would long ago have been forced upon our legislature with all the exaggeration that usually characterizes agitations of this kind.

It appears to me that enlargement of the prostate is especially interesting to us in relation to its earliest and to its most advanced forms, and it is to these points that I shall more directly refer.

If we take the obstructive disorders of the urinary apparatus, and inquire what feature of them is most detrimental to the associated parts, the answer undoubtedly will be, The misdirection of the muscular force that is thereby entailed. How can we explain the structural alterations which take place behind the obstructed point, and which manifest themselves in different ways, except as the results of urinary retention and retrograding pressure. How frequently do we find, in cases of stricture or enlarged prostate, that the whole of the apparatus behind the primary con-

striction consists of little else than dilated saccules and tubes. Is not this back-pressure going on, though it may be imperceptible, from the moment that impediment arises to the escape of urine from the bladder? The more we study animal mechanics, either in their physiological or pathological application, the more can we appreciate the truism that force is never lost; if it is not permitted to act for good, it must be productive of evil; if it is not exerted towards the legitimate fulfillment of a normal act, it must inevitably exercise a corresponding pressure in an abnormal direction. Whenever I see in the post-mortem room an ordinary specimen of dilated kidney, tortuous ureter, or sacculated bladder associated with an enlarged prostate, or a stricture, the expression "misdirected force" almost involuntarily escapes from me.

Such considerations as these have long led me to believe that our treatment of prostatic stricture commences, as a rule, far too late; we delay until the bladder shows, by the formation of a pouch or a saccule, behind the prostate, the first bad influence of back-pressure before we seek to rectify it.

I have endeavored to prove how much good may be done by the adoption of judicious mechanical treatment on the appearance of indications that the prostate is commencing to obstruct micturition, and I have founded my suggestion upon a condition which may be seen illustrated in any museum, namely, one in which, though the gland has become large, obstruction has not been known to occur. An extended adoption of this practice has convinced me that the pressing symptoms connected with an enlarging prostate may be kept in abeyance by the timely employment of those principles of treatment which are generally recognized as being applicable to any tubes within the body which are threatened with occlusion and are within our reach.

In the more advanced forms of prostatic enlargement, where the bladder has been converted into a receptacle little better than a chronic abscess in which urine stagnates, surgery has done much to afford relief.

When the comfort that catheterism is capable of affording has ceased to be effectual, other plans of establishing a drain for the urine are at our disposal. It is not necessary that I should discuss the various means of effecting this; let me, however, say a few words in reference to two which have more recently come under notice; these are, first, incision into the bladder from the perineum, and secondly, paracentesis through the enlarged gland.

For the purpose of securing a more or less permanent channel for the escape of urine from the bladder, other than that by the urethra, I must admit that following the practice of Syme, and to some extent of Edward Cock, I have a decided preference for an incision through the perineum, on the twofold ground of safety and comfort. We have had numerous examples of the great advantage that cystotomy is capable of affording for bladder affections, dependent on a large prostate—none perhaps more striking than the case narrated by Mr. Lund, on the memorable occasion of the meeting in London of the International Medical Congress. The paper closes with this observation: "I have thus placed on record this case, unique in its character, and interesting and encouraging in its results, with the hope that should a similar case occur to any surgeon now present, he will not hesitate to give

his patient the chance of benefit from a course of procedure so simple in its nature, and so likely to be followed by temporary, if not permanent, benefit."¹

I may be permitted here to submit to your notice a method of puncturing the bladder through the enlarged prostate which has afforded very gratifying results. It consists in passing the trocar through the gland, and retaining it in the perinæum, so as to afford a permanent as well as a convenient drain for the urine. I should have had more diffidence in commending this operation to your notice had it not received the approval of our distinguished associate, Professor Gross, whose contributions to the Surgery of the Urinary Organs are held in deservedly high repute on both sides of the Atlantic.

Though the primary object of cystotomy, as usually practiced, is merely to place the bladder at rest, by providing a continuous drain for the urine as well as the products of cystitis, it occurred to me, as it had already done to others, that it would be possible to extend this proceeding, with the view of removing those barriers to micturition which the hypertrophied gland so frequently presents.

It was to meet conditions such as these that Mercier introduced and practiced division of the prostatic bar by means of a cutting instrument introduced along the urethra. This plan, though admirable in its conception, was open to the objection that in its execution it was necessarily uncertain, there being no means of ascertaining with certainty that the section was confined to the obstruction to be removed. On carefully considering the position of matters, as well as the proposals that had been made, it appeared to me more reasonable to attempt to divide the prostatic obstruction at the neck of the bladder from an opening made into the membranous urethra, than by means of instruments which had to traverse the whole length of the canal. I have recently brought under notice a case² in which I thought it desirable to explore the prostatic urethra from an opening made in the perinæum, through which I was enabled to divide with precision a prostatic barrier. The division of this portion of the gland was followed by complete restoration of the power of micturition, and has so far proved of permanent advantage.

The proceeding which I have thus put into practice seems first to have suggested itself to Mr. Guthrie, but I cannot find that he ever employed it; that it is not identical with the somewhat extensive incision of the prostate as for lateral lithotomy which was practiced by Sir William Blizard is at once obvious. Its aim is to divide the obstruction — and the obstruction alone — by an opening so planned as not to expose the patient to undue risk; whilst, at the same time, it is capable of affording the greatest amount of room for manipulation by an extension of the incision, should this prove to be necessary.

I need hardly observe that a proceeding of this kind should be undertaken before the bladder has passed into a condition of confirmed and irremediable atrophy; otherwise, though we may succeed in removing an obstacle to the introduction of the catheter, our prospect of restoring the power of micturition will be as hopeless as it has proved to be under somewhat similar circumstances where the operation of lithotomy has been undertaken.

It is impossible to avoid the conclusion, from their examination after death, that many atonied bladders might have been prevented becoming so by the timely removal of the obstruction by which a condition of permanent paralysis was induced and maintained.

The operative treatment of the enlarged prostate, when it obstructs micturition to a degree that cannot be met by judicious catheterism, is yet, I believe, open to considerable improvement.

Though the literature relating to either complete or partial excision of the prostate is very limited, there is much in it of promise. In one case, where I extirpated the whole gland for malignant disease, the benefit that followed far exceeded my expectations. It was that of a middle-aged man who, by reason of a carcinomatous prostate, was threatened with a speedy and painful death. I cut down upon the gland in the median line, and succeeded in enucleating it tolerably cleanly with my finger. I saw this patient eight months afterwards in very fair health, and quite able to go about his business. So far he has enjoyed an immunity from the symptoms which induced me to perform this operation, and though his disease is a malignant one, we have every reason to be content with the results obtained.

Then we have numerous examples where considerable masses of the prostate have been removed with very great advantage in the course of operations on the bladder. Amongst these I would specially mention an important case by Mr. Bickersteth; and, more recently, another by Dr. John Ashhurst, of Philadelphia, in which the whole of an enlarged third lobe was successfully removed.

Cases such as these seem to favor the hope that operative surgery will be found capable of affording more relief to exceptional instances of this kind, and of extending to the large prostate the treatment which in some degree is applicable to other deep-seated growths.

Mr. Harrison then expresses his dissent from the views of Ovis in regard to the necessity of internal urethrotomy, and, with allusions to various other matters connected with urethral and general surgery, concludes by saying that there need be no hesitation in asserting that whether we are regarded as preventers of disease, or as practitioners of surgery or of medicine, every one of us in his daily practice carries with him a proof that year by year something additional is contributed by our profession to the comfort and the life of man.

THE DIAGNOSIS OF TÆNIÆ INTESTINALES.

A WRITER in the *Dublin Journal of Medical Science* (May, 1883) emphasizes the importance of making a diagnosis between the *tænia solium* and the *tænia mediocanellata*, because of the greater difficulty in treating the latter and because of the possibility, as he considers, that the drug most valuable against one variety of the parasite may not be the most so against the other. The differential diagnosis can be easily made by a naked eye examination of the *proglottides* or mature segments, which are found in the stools; or, if the segments at the time of examination are too opaque, place one of them on a glass slide, let it dry, and then all the necessary parts for examination become very distinct.

The mature segments of *tænia solium* measure half

¹ Trans. International Medical Congress, vol. ii.

² British Medical Journal, June 9, 1883.

an inch in length by a quarter of an inch in breadth; have the genital pore on one or other lateral border, and midway between the anterior and posterior extremities; the elongated uterus has only from twelve to fifteen lateral branches. The segments of *tænia mediocanellata*, on the other hand, are much larger, the length being one inch, and the breadth nearly half an inch; the genital pore, as in the former case, will be found on one or other lateral border, but nearer the posterior than the anterior extremity; the uterus, which is elongated, possesses from thirty to thirty-five lateral branches on each side. *Bothriocephalus latus* occurs more rarely, but its segments are easily known, by being broader than long, having the uterus and its branches arranged in the form of a central rosette, and the genital pore on the surface.

In a case reported by this author incomplete removal of the parasite was effected some seven times, the usual agent being one-drachm doses of *ex. filicis fl.*, accompanied before and after by cathartic pills. The successful agent was a three-drachm dose, repeated in three hours. He considers that the ordinary dose recommended in the British Pharmacopœia (twenty to thirty minims) is quite inadequate.

OPERATIVE TREATMENT OF CANCER OF THE TONGUE.

THE steps of Billroth's method are reported in the *London Medical Record* as follows: Both lingual arteries are first ligatured; the mouth is then kept open by a speculum, and all diseased teeth opposite the ulceration are extracted. The gum is next separated from the inside of the lower jaw with the raspator. Excision of the floor of the mouth is then effected by means of scissors and forceps. The bleeding points are ligatured, and the tongue, being drawn forward, is finally extirpated. After the separation of the organ, permanganate of potash, either in powder or in watery solution, is applied to the wounded surface, and a drainage-tube, of the thickness of a finger, is inserted through the floor of the mouth. Through this the various discharges escape, and diphtheria of the mouth, cervical phlegmon, and broncho-pneumonia, do not occur in such cases when properly drained. The patients are fed by means of a stomach-tube, until the drainage opening has quite closed.

The proceeding is not so severe as the methods of Langenbeck and of Regnoli and Czerny; and the immediate results of the operation are more favorable than by any other plan, namely: 84.2 per cent. of recoveries. The deaths were caused by septicæmia (acute or chronic) or by pyæmia. In seventy-one cases ten radical cures have been obtained (fourteen per cent.) by Professor Billroth; while in 373 instances of mammary excision only fifteen radical cures have resulted.

SALICINE IN RHEUMATISM.

A WRITER in the *Lancet* (May 5, 1883) speaks favorably of salicine, the natural product of the willow root, as often giving better results than salicylic acid, the artificial phenol derivative. He says that while the latter will sometimes sicken even in moderate doses, almost any quantity of the former can be given, and records two cases of acute rheumatism rapidly cured by

its use. He advises it in large and frequently-repeated doses. One of his cases took eighty grains in one dose, daily, for three days without any bad effect. Salicine in very large doses is most easily taken by stirring it into a hock glass of milk, which the patient rapidly swallows before it has time to settle down from its suspension. It may also be taken in wafer paper, or even in water, but in this case the bitter flavor is felt. It should always be taken on an empty stomach; after food it often occasions nausea and tinnitus. He believes that its value in acute rheumatism cannot be over estimated, and that should the physician get hold of the case early he will likely be able to conquer it before there is time for cardiac complication, so apt to leave enduring mischief behind it. Finally, when the rheumatic sufferer convalesces, the salicine should not be dropped too suddenly. For a week it should be given in full doses morning and evening, and for a fortnight once daily; otherwise a relapse may supervene. A notable feature in the salicine treatment is its tonic effect in promoting a steady and rapid recovery of strength and vigor during convalescence.

It is very cheap, selling in England, at retail, for less than twenty-five cents per ounce.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JULY 20, 1883, TO JULY 27, 1883.

SUTHERLAND, CHARLES, colonel and surgeon, medical director Military Division of the Pacific and Department of California. The leave of absence granted by S. O. 64, headquarters Military Division of the Pacific, June 30, 1883, is extended two months. S. O. 168, A. G. O., July 23, 1883.

BAILY, JOSEPH C., major and surgeon. Assigned to duty as post surgeon at Fort Concho, Texas. S. O. 87, headquarters Department of Texas, July 19, 1883.

APPEL, A. H., first lieutenant and assistant surgeon. Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 30, headquarters Military Division of the Atlantic, July 20, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JULY 28, 1883.

GATEWOOD, J. D., passed assistant surgeon, detached from the New Hampshire, and ordered to hold himself in readiness for sea-service.

LEACH, PHILIP, assistant surgeon, detached from the receiving ship Franklin and ordered to the New Hampshire.

HORACE B. SCOTT, assistant surgeon, ordered to the receiving ship Franklin, Norfolk, Va.

McMURTRIE, D., surgeon, detached from the receiving ship Franklin and granted sick leave.

WHITING, ROBERT, passed assistant surgeon, granted one month's leave.

APPOINTMENT. — Dr. Edgar A. Dean, of Brockton, has been appointed a member of the Massachusetts Board of Health, Lunacy, and Charity, to succeed Mr. C. F. Donnelly, whose term of service had expired.

DR. L. S. McMURTRY has retired from his editorial connection with the *Louisville Medical News*, and Dr. H. A. Cottell resumes his former connection with that journal.

BOOKS AND PAMPHLETS RECEIVED. — A History of Tuberculosis from the time of Sylvius to the present Day, being in part a Translation, with Notes and Additions, from the German of Dr. Arnold Spina; containing also an account of the Researches and Discoveries of Dr. Robert Koch and other Recent Investigators. By Eric E. Sattler, M. D. Cincinnati: Robert Clarke & Co. 1883.

Original Articles.

A CONTRIBUTION TO THE STUDY OF THE TUBERCLE-BACILLUS.¹

BY HAROLD C. KÄNST, M. D., JAMAICA PLAIN.

At a medical meeting in Vienna, on May 13th, Spina² read a paper on the subject of Koch's bacillus. It was especially devoted to the discussion of its behavior towards staining fluids, and he still denies any specific property to it. He gives no further inoculation or cultivation experiments, and bases his rejection of Koch's theory especially upon the fact that the bacilli are found to act otherwise toward staining fluids than it was at first announced they did.

In proof of the presence of other organisms having the same staining reaction he gives the result of Dr. Matray's work, which is as follows:—

(1.) Micro-organisms of many kinds, especially staff-shaped bacteria, cocci singly and in colonies, leptothrix and torula forms, were stained blue on a brown ground: (a) in bronchiectic sputum; (b) in sputum of bronchial asthma; (c) in sputum of diffuse bronchitis (every time in ninety-four preparations); (d) in the "furred tongue" of non-phthisical patients (eleven cases with twenty-eight preparations); (e) in the lochia of non-phthisical lying-in women (twelve cases with forty-three preparations); (f) in the sputum of fourteen cases of pneumonia (forty-six preparations); (g) in the stools of a typhus-fever patient; (h) in the expressed fluid of a case dead of malignant oedema.

(2.) Bacilli in form, size, grouping, and reaction like the tubercle-bacilli were seen: (a) in the sputum of a case of bronchiectasis (in fifty-four preparations); (b) in the furred-tongue secretion of sick and well persons (eleven cases, twenty-eight preparations); (c) in the stools of a typhus-fever patient (every time in sixteen preparations); (d) in the sputum of a case of bronchial asthma (every time in thirty-four preparations); (e) in the sputum of a case of diffuse bronchitis (six preparations); (f) in the lochia of a healthy lying-in woman (two preparations); (g) in a case of croupous pneumonia (four preparations).

He quotes Kaberhel and Matray (assistants assigned to him by Stricker) as concluding that, "on the one hand, micro-organisms which do not differ from the tubercle-bacillus react to staining fluids as do these bacilli; and, on the other hand, that Koch's bacilli react to staining fluids exactly as do other micro-organisms."

He also quotes, as a point against the specific nature of the tubercle-bacillus, the recent observation of a bacillus similar to these in several cases of lupus.

Stricker himself addressed this meeting in support of Spina and his methods.

Klebs,³ as the result of his more recent work, gives the following summary:—

(1.) The tuberculous process is caused by organisms, as was first shown by me, and rendered certain by R. Koch.

(2.) I have not come to the same results as Koch in regard to the morphological relations of the tuberculous organism. On the one hand I must hold fast to the fact that finely granular micrococci are present in

the albumen cultures, as well as in the youngest form of inoculated tubercle. On the other hand I am in no way meaning to assert that Koch's bacilli are essential impurities. They appear to represent an essential stage of development of the tubercle organism for the further development of tuberculosis, if they are not always present.

(3.) In regard to the history of the development of tuberculosis I think that I have presented the proof that:—

(a.) The development of the tuberculous process begins very soon after the inoculation, and not after from ten to fourteen days, as Cohnheim and others believe. The difference depends, not upon an error of these last investigators, but upon the nature of the changes which are to be regarded as the first stage of the tuberculous process. Completely formed tubercles, which can be distinguished with the unaided eye, appear in fact only after the longer period. But before the appearance of these there are already extensive cellular deposits present in places which are at a great distance from the place of inoculation (mesentery). These represent perivascular infiltrations which are either developed further to the known form of tubercles or can retrograde in the different stages of their development (cheesy nodules, either with or without contracting cicatrization, adhesive and deforming forms of peritonitis).

(b.) The same primary method of distribution is also found in human tuberculosis, in which also the traces of these retrogressive formations in the mesentery and omentum are found in cases of pulmonary tuberculosis. In other cases, on the contrary, a further development of this form of tuberculous invasion comes on, which leads to the formation of cheesy foci in the organs, which are only related by means of the blood-vessels with the point of entrance of the tubercular virus into the organism (cheesy foci of the bones, the central nerve apparatus, etc.).

The work which I have done upon this subject has been for the purpose of identifying the bacillus and determining the frequency of its occurrence in tuberculous lesions. The organs examined have been lungs, liver, spleen, kidney, peritoneum, bronchial, mesenteric, and inguinal glands, pia mater, and the eye. In all of these bacilli have been found in varying numbers. They are less numerous in old, or slow, processes; very abundant in rapid ones, and especially so in the cavities filled with cheesy material. They are found in the swollen epithelioid cells of tubercle, or lying between them—singly, or in groups of from two to a dozen or more. They very frequently seem to be divided into a series of dots, from four to six in number, which occupy the body of the staff, and are taken to be spores. The result of my observation is confirmatory proof of the existence of the bacilli, and of Cheyne's proposition that their presence is diagnostic of tubercle. The difficulty with which they have been demonstrated in some cases and the care required to obtain the desired result seem to explain some of the failures in this direction. Nothing less than a one twelfth Zeiss objective, together with an Abbé's illuminator, is sufficient for the perfect examination of a section. All my observations have been made with this apparatus and a No. 3 eye-piece. All the sections have been made with a Jung microtome. Upon several occasions the bacilli have been observed in the blood-vessels, which would seem to show one method

¹ Concluded from page 104.² Spina, Wien. Med. Presse, May 13, 20, 1883.³ Klebs, Virchow's Arch. f. Exper. Path. und Pharm., Band xvii., s. 51.

of auto-infection; the lymph channels undoubtedly furnish another. I have seen a bacillus lying half in, half out of, a swollen cell, its presence seeming to have acted as an irritant upon this special cell element. I have never seen anything but the bacillus staining red on a blue ground, although there have been plenty of other organisms which were stained blue.

The method of staining employed has been practically that of Ehrlich, which has seemed to give the most satisfactory results. It is as follows:—

For sputum: The cover-glasses are spread with a thin layer, taken from the more solid portion of the specimen, using fired platinum needles for its distribution. They are then dried carefully over the flame of an alcohol lamp, and after drying are passed two or three times through the flame itself. They are then placed in a solution of Fuchsine B. and aniline oil,—one gramme of the first to fifty grammes of the second. The latter is made by shaking a few drops of aniline oil with distilled water, and filtering. The specimens are allowed to stand in this solution for twenty-four hours. They are then washed and placed in a solution of one part of nitric acid (C. P.) and two parts of distilled water, and allowed to remain until they are completely decolorized, or until at the most a pinkish hue is all that is left visible to the eye. All the acid is then removed by repeated washing in distilled water, and the specimens are placed in a saturated watery solution of methylene-blue, and allowed to remain for five to eight minutes. The superfluous staining fluid is then removed by repeated washing, the specimens are carefully dried as before, and are finally mounted in Canada balsam and examined.

For the tissues a similar method was pursued, except with the differences made necessary by their nature. Before placing in the Fuchsine solution the alcohol should be removed by thorough washing, and the reagents should be allowed to act for a longer time, more especially when the sections are thick or the specimens are old. After staining in methylene blue they should be washed, dehydrated in alcohol, cleared up in oil of cloves, and mounted in Canada balsam.

The following is a complete record of the examinations I have made of different organs for the detection of the bacilli:—

No. I. A guinea-pig inoculated in the groin with a few drops of tuberculous sputum in December, 1882, died in the middle of January, 1883.

Sections were prepared from the liver, spleen, and peritoneum; the lungs were healthy.

No bacilli were found in the sections of the liver.

The spleen showed bacilli singly in the tissues and in the swollen epithelial cells.

The peritoneum contained bacilli in the miliary nodules, about the edges, and in the centre of the tuberculous mass.

No. II. A guinea-pig inoculated in the same manner as the preceding, died January 13, 1883.

No changes in any organ but in the liver.

Slides from this showed the bacilli in numerous places in and near the tuberculous portion, which was in the form of infiltration rather than of nodules. The general position of the bacilli was in the lymphoid cells, and rather in the region of the portal vein.

No. III. A guinea-pig inoculated as the preceding, in December, 1882, died in March, 1883.

The lungs presented no abnormal appearances.

The spleen showed plenty of evidence of degenera-

tion, and bacilli were found in numbers in the cells and lying free in the tissues.

The liver and an enlarged inguinal gland were examined, with negative results.

No. IV. A guinea-pig inoculated on March 13th with a few drops of tuberculous sputum (from Case IV.); the syringe was inserted in the left inguinal region just under the skin. Died in ten days.

All the organs gave negative results, except in the spleen, where, with no changes visible to the naked eye, a number of bacilli were found in and near the finer blood-vessels.

The cellular tissue at the point of inoculation was found to be stuffed with bacilli, lying in and between the much swollen cells, and in immense numbers.

No. V. A guinea-pig inoculated in the same manner as the first three in December, 1882, died, after progressive emaciation, on April 2, 1883.

All the organs showed tubercular infiltration, and sections under the microscope showed bacilli in the lungs, liver, spleen, kidney, inguinal glands, and skin under the point of inoculation.

No. VI. A guinea-pig inoculated in the eye in December, 1882, died April 15, 1883.

The lungs, liver, and glands showed signs of disease.

The bacilli were found in plenty in the giant cells and the alveolar walls of the infected portion of the lungs, and in smaller numbers in the cells, and lying free at the edges of the tuberculous deposit in the liver. They were also found in the gland examined.

No. VII. A child of three and one half years died of acute miliary tuberculosis.

Sections from the lung, liver, and mesenteric gland showed bacilli very distinctly. Slides from the liver and peritoneum were unsuccessfully mounted and gave negative results.

No. VIII. A cheesy bronchial gland, removed three months before examination, and preserved in absolute alcohol.

Bacilli were found in plenty in the cheesy portions near their edges; fewer in the degenerated parts, and scattered through the comparatively healthy tissue beyond.

No. IX. A case of acute miliary tuberculosis in a child.

Sections from a peritoneal gland and the liver gave negative results; there was no tuberculous infiltration on the slides prepared.

The sections from the kidney contained very little tuberculous infiltration. Bacilli were noticed in small numbers in the region of the straight tubules, and a few in the interior of swollen Malpighian bodies.

The omentum contained occasional masses of bacilli, with numbers of isolated staffs in the infiltrated tissue.

No. X. A specimen marked "Gland from Autopsy."

But two slides were prepared from it, and gave no evidence of the presence of bacilli.

The specimen was very old, and had no attainable history; it may therefore be fairly rejected as evidence.

No. XI. Tuberculosis of lung.

A specimen of very old fibroid phthisis. The tissue under examination was almost all cicatricial, and nothing was seen that could be distinctly made out as the bacillus.

No. XII. Tuberculosis of peritoneum.

The nodules were extremely fine and widely separated, and a section of one was not obtained. Bacilli were seen, however, in small numbers, lying singly in the tissues where the presence of swollen cells indicated the neighborhood of the tuberculous process.

No. XIII. This was a specimen sent in as a "cheesy mesenteric gland," from a case in which death was caused by the perforation of an ulcer of the intestine into the peritoneal cavity and the subsequent peritonitis.

There was no tuberculous disease of the gland at all, and bacilli were not found.

No. XIV. Contents of a cheesy cavity from the lung of a rapidly fatal case of tuberculosis.

Bacilli were found in immense numbers; in some cases the cells seemed to be stuffed with them, and most of them showed a well-marked division into spores.

No. XV. Scrapings from the wall of a lung cavity in an ordinary case of phthisis.

Bacilli in immense numbers. In some places the whole field filled with them.

No. XVI. Contents of a lung cavity in a case of slow tuberculosis.

Bacilli in immense numbers, in masses and singly, and presenting well-marked divisions into spores.

No. XVII. Cheesy cervical gland.

Largely made up of fibrous material, with a few small cheesy foci. Bacilli were found in the edges of these portions in clumps and singly, and in the few giant cells that were seen.

No. XVIII. Case of tubercular meningitis; dead after a month's illness.

A much enlarged bronchial gland was found, and the pia mater was full of minute granulations.

Bacilli were found scattered about near the edges of the tubercular portion of the gland, with many spores.

Sections of the pia mater showed very fine bacilli, with many spores, their situation being, in general, in the neighborhood of the finer blood-vessels and the lymph spaces. The origin of infection in this case was very evidently the enlarged gland.

No. XIX. Tuberculous lung.

This specimen was a mass of tubercle, with cheesy foci and cavities.

The bacilli were found in the edges of the cheesy mass, in some instances in its centre. There were many spores, and occasionally bacilli were seen in what was apparently healthy tissue.

No. XX. Tuberculous lung.

This, like the preceding, was a mass of tubercle, with many cheesy foci and much cicatricial tissue.

Bacilli were found, in not very large numbers, near the edges of the more recent degenerations; in much less abundance in the old fibrous portions.

No. XXI. Tuberculosis of kidney.

Bacilli were found in plenty in the contents of a small cavity in the cortex of the kidney, and in the tissue from a nodule near by.

This case had been diagnosed during life as a perinephritic abscess, and a drainage tube had been inserted for almost a year.

No. XXII. Tuberculosis of eye.

This specimen was removed last fall, and had been preserved in chromic acid.

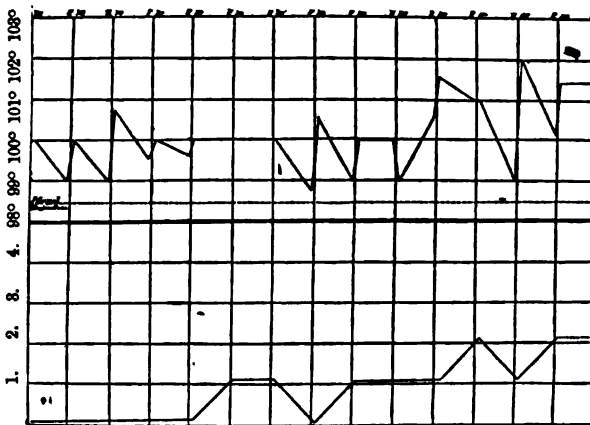
It was only after two attempts, and staining prolonged for forty-eight hours, that a few bacilli were discovered in the nodule.

No. XXIII. Acute miliary tuberculosis in a child.

Bacilli were found in large numbers in the cells in the tuberculous portions of the spleen, of an enlarged cheesy mesenteric gland, and in a tuberculous ulceration of the intestine.

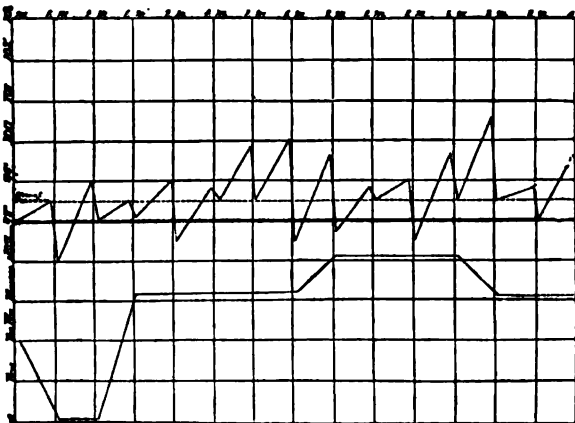
As a result it will be seen that in every case of inoculation tuberculosis was developed, and the microscope revealed the bacillus in some portion of the organs of the animals experimented upon. There are a number of guinea-pigs still under observation. I was able to trace the bacilli with increasing certainty as practice trained my eye for their definition in the tissues. I have found a marked difference in the apparent size of these organisms in the sections examined. In some specimens they appear very fine and delicate, — almost indistinguishable, — sometimes only a line of dots being visible; in most cases they are exceedingly distinct and well marked. However, as they are always of the same size and appearance in the preparations of fluid matter, and as those which appear to be finer and more delicate seem to fade quicker, I am led to believe that the apparent variations in size are due to optical effects from imperfect staining. Some observers obtained their results in the examination of tuberculous tissue by grinding a tubercle in a mortar with water and drying the resultant mass upon cover-glasses in the manner of sputum preparations. The ease of this method is more to be commended than its accuracy, for in an examination of this kind every source of error should be eliminated that it is possible to get rid of.

In February last I began a series of observations of the sputum of a set of phthisical patients, all known to be so by the physical signs. These observations have been continued up to very recently, and the results obtained in five represented in a diagrammatic manner upon the charts. The upper curve represents



CASE II. Sick for one year, hæmoptysis the first symptom.

From February 17th to June 3d fourteen examinations were made, with positive results in thirteen. When bacilli were found at all they always occurred in large numbers. (Vide Chart II.)

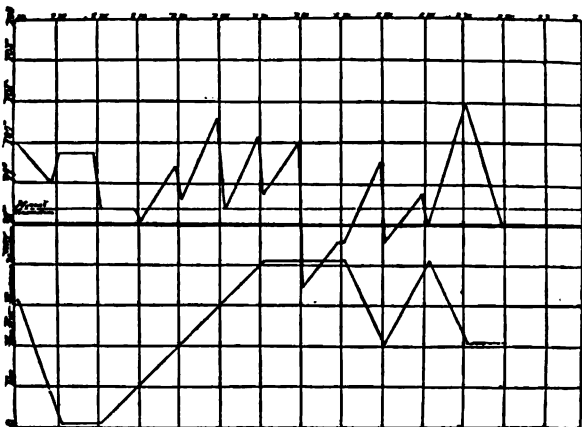
CHART II.¹

CASE III. Cough for six months. Gained weight while under observation, and was finally discharged relieved.

From February 17th to April 20th eleven examinations were made, with positive results in six. For five successive examinations no bacilli were seen, and they never occurred in large numbers.

CASE IV. Cough for eight months.

From February 17th to April 20th ten examinations were made, with positive results in nine. The number

CHART III.¹

of bacilli varied very greatly, and the results are tabulated on Chart III.

CASE V. Sick for seven years.

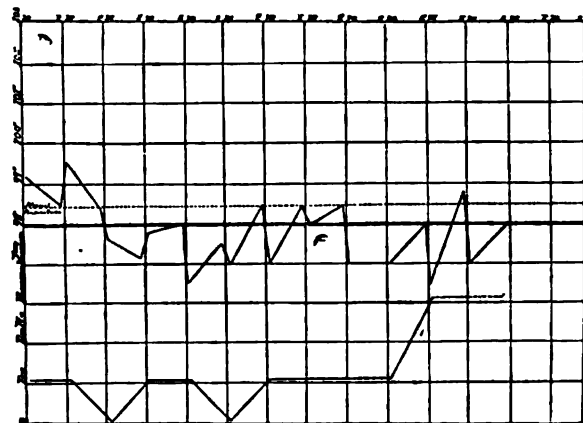
From February 17th to June 3d fifteen examinations of the sputum were made, with positive results in nine; the bacilli always occurred in very small numbers. (Chart IV.)

CASE VI. Sick for three years, hæmoptysis the first sign.

From February 17th to June 6th there were fifteen examinations of the sputum, with positive results in twelve. The bacilli were always very few until the last examination, when the number observed increased

very greatly, but with no corresponding increase in the temperature. For three months this patient's temperature has been sub-normal much of the time. (Chart V.)

CASE VII. Sick one year, hæmoptysis the first sign. From April 20th to June 3d four examinations were

CHART IV.¹

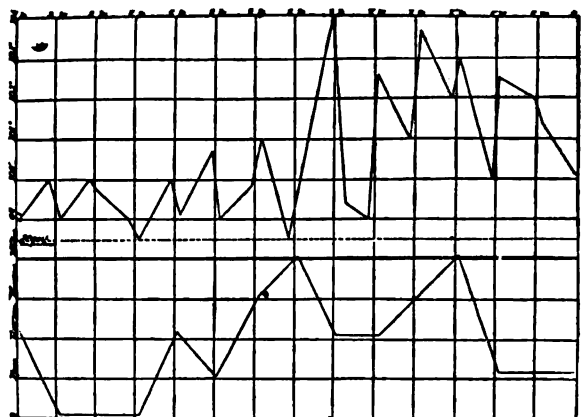
made, and very many bacilli were found in every case. This patient's temperature curve was pretty constantly high.

CASE VIII. Cough for one year.

From May 19th to June 3d three examinations were made, with bacilli in diminishing numbers, the temperature upon the days of the examinations being less each time also.

CASE IX. Cough for two years.

From May 19th to June 3d three examinations were

CHART V.¹

made, with very many bacilli in every case. The temperature, however, showed no exact correspondence.

CASE X. Cough and hæmoptysis for ten years.

From February 17th to June 3d fifteen examinations were made, with positive results in six only, and in these the bacilli were always seen in but very small numbers. The temperature of this patient has been for weeks at a time within half a degree of normal.

CASE XI. This was a case of pleurisy, which was examined for comparison.

From March 14th to May 19th seven examinations were made, with negative results in every case.

A comparison of the charts tends to show that there

¹ For reading see Chart I., preceding page.

is only a very general correspondence between the numbers of the bacilli and the height or variations of the fever line. A large number of bacilli does not necessarily mean a high temperature. The fever curve of each patient varies somewhat, and has a general average of its own, sometimes a very high one and sometimes entirely the opposite. It is with this average range of temperature in the special case that the number of the bacilli must be compared; and it is only by this observation of special cases that the information obtained is of value. It is also shown that a continued examination of the sputum for weeks at a time may be necessary before the absence of the bacilli can be definitely assumed, as is shown in Case V., where six successive examinations were made before they were detected. In rapid cases, with free expectoration, there are enormous numbers of the bacilli to be found. The characteristics of the sputum also seem to be something of a guide to the number of bacilli that one may expect to find. If it is largely mucous, with but a few yellowish nodules in it, bacilli will only be found in these nodules, and then, possibly, only in small numbers. If, however, the sputum be of a more purulent fluid character, the bacilli will probably be present in great numbers whatever portion is examined.

The result of all the work that has been done upon this subject may be summed up as follows:—

I. A staff-shaped micro-organism exists, in all forms of the tuberculous process, and its presence has been demonstrated in them.

II. It is more abundant in the rapid than in the slow forms of the process.

III. Its specific nature as the cause of tuberculosis is claimed by Koch on the ground of his observations.

IV. Its specific character has not been successfully refuted by trustworthy observations.

V. Its value as diagnostic evidence of tuberculosis is very great, although its absence cannot be considered as excluding that process.

The only observer who has thus far attempted the repetition of Koch's cultivation experiments is Professor Feltz,¹ of Nancy, who has announced the complete failure of his work. The manipulation is such, however, that more than one failure must occur to upset the testimony of complete and repeated successes.

THE USE AND ABUSE OF ERGOT.²

BY GEORGE L. WOODS, M. D., OF SPRINGFIELD.

THE object of this paper is to invite attention to the action and therapeutic indications of ergot of rye, more especially in obstetric practice, with some incidental observations upon its possible dangers on the one hand, and its latent resources on the other. Although the use of oxytocics has existed from very remote times, the list of drugs which possess this property in a special degree is very short.

It has been ascribed in varying degrees to borax, cinnamon, tansy, cottonroot bark, cannabis indica, etc., but the leading member of this class which has attained such importance and universal use is undoubtedly ergot of rye, and this very fact, to the mind of the writer,

justifies and calls for our constant study of this powerful agent until we better understand its capacity and resources.

The natural history and general characteristics of spurred rye, and the numerous but unsatisfactory attempts to isolate its active principle which have been made, are familiar to us all, and need not detain us. The phenomena of chronic poisoning, which Trousseau so graphically describes as seen among the peasantry of France, who largely consume ergoted rye as food, we do not see. The symptoms of acute poisoning, which also we seldom see, are, briefly, dilatation of pupils, dimness of vision, frontal headache, giddiness, stupor, collapse, and sometimes partial paraplegia. Dr. E. R. Squibb considers an underfed and semi-scorbutic habit of body essential to the development of poisonous symptoms from the ingestion or administration of ergot.

The presence of ergot in rye flour may be demonstrated in the following manner: Mix a small quantity of the sample with ether, add a few crystals of oxalic acid, boil, and allow the liquid to clear. A red tinge indicates the presence of ergot.

When our countryman, Dr. Stearns, first called attention, in 1807, to the scientific use of ergot as a uterine motor stimulant, its physiological action was but imperfectly understood, and even now eminent authorities can scarcely agree upon more than the one incontrovertible fact, that ergot increases the force and frequency of the contractions of the uterus with a tendency to make them tetanic in character. That it has a similar contractile effect upon all unstriated muscular fibre, which is so generally distributed in the hollow muscular organs, seems equally clear.

Wernich attributes the ecbotic properties of ergot to irritation of the uterine nervous centres, caused by secondary arterial anæmia of the spinal cord, due to loss of tone in, and dilatation of, the veins.

Kohler refers the contractions to increased irritability of the peripheral nerves in conjunction with spinal anæmia.

A committee on therapeutics in the Chicago Society of Physicians and Surgeons recently reported that ergot excites activity of cardiac inhibitory centres, and also the vaso-motor nervous centre in the medulla, thereby slowing the heart's action, causing contraction of the arterioles, increase of blood pressure, diminution of blood supply, and predisposing to death of the extremities. Very large doses then would seem to have a paralyzing effect upon the heart.

A knowledge of the physiological action of drugs is generally essential to their judicious administration. The most prominent action and use of a drug should not engage our attention to the exclusion of other occasional but deplorable effects. We should remember that quinine is not only our closest approximation to a specific in ague, but that in certain cases and conditions it works an irreparable injury to the organ of hearing, and that an ecbotic effect upon the gravid uterus has been directly caused by its careless and routine exhibition. So in the use of ergot, every consideration of professional honor, success in practice, and safety of our patients, requires of us an abiding consciousness that we are using a double-edged sword, potent not only to stimulate a flagging uterus, but equally capable in careless hands of destroying valuable life, and mortally wounding a professional reputation. But however interesting and instructive it might

¹ Feltz, Gazette Hebdomadaire, March 2, 1873.

² Read at the annual meeting of the Massachusetts Medical Society, June 12, 1883, and recommended for publication by the Society.

be to know precisely how the nervous, circulatory, and muscular systems are influenced by ergot enough may now be learned by the obstetrician to insure its safe employment.

When we reflect upon the extensive, indiscriminate, and unscientific use of this potent agent by ignorant empirics long before its recognition by the profession, we may well question whether more harm than good did not result. Seventy-five years ago, when it was first introduced, medical science was embryonic as compared with its grand proportions of to-day; the investigation of new remedies was not then a daily occurrence. The drug had to wait long years before its constituents were demonstrated by analysis and it became established in popular favor. The earlier writers give meagre and careless directions for its use,¹ and discredit the occasional reports of its deleterious influence upon the fœtus which were made thus early. However presumptuous it may appear to criticize the medical teaching of the past fifty years, a certain independence of thought and action is justifiable. It is thus that our science progresses. In proportion as we break away from the traditional and plunge into the experimental do we confirm and establish existing theories or discard and supplant them with those which are new and progressive. Because our text-books have always taught that with certain precautions ergot is innocuous in tardy labor we are not obliged to accept the statement as a fact if it can be shown at present or in future that its use has not been sufficiently restricted. That such has been and even now is the case is the firm conviction of the writer.

The use of ergot in the first stage of labor is not to be mentioned in this presence.

In view of the instruction which the average graduate has received, and the fact that he enters upon the practice of obstetrics without having seen a case of labor, but with an indefinite idea that ergot is a harmless time and labor saving drug, its employment in the second stage of labor becomes a radically different matter. Abundant authority for this use, however, is attested. The indications usually given, which present such a remarkably stereotyped appearance in every succeeding work on obstetrics as to preclude in the mind of the student the possibility of any other views being entertained, may be tersely stated as follows: In lingering labor from uterine inertia it is regarded as essential that the presentation be vertex, the cervix well dilated, the perinæum and ostium vaginæ relaxed, and that there be no fœtal or pelvic deformity or other obstruction to the speedy delivery of the child. The contra-indications as given naturally suggest themselves, but it is the main object of this paper to express the belief of the writer, who never gives ergot at this stage of labor, but uses the forceps instead, that our authorities have been too liberal in their indications; that the contra-indications and dangers have not been fully appreciated or enumerated with sufficient fullness and clearness; that the routine administration of ergot, into which some of us fall, has been productive of great harm; and, finally, to urge its greatly restricted use.

As employed by intelligent physicians to-day rupture of the uterus is doubtless a remote danger to the mother, but if we only had access to Clay's Hand-Book of Obstetric Surgery, and gave ergot when the os uteri became dilated to about the size of half a crown, as therein directed, the prospect of a lacerated cervix

would be exceptionally good. The approximately uninterrupted pressure of the head upon an incompletely dilated os is well calculated to bring about this untoward result. Clay is evidently prejudiced in favor of ergot, for he allows its moderate use in primiparæ, and bids for distinction in connection with its introduction to British obstetric practice.

Rupture of the perinæum is an accident, irrespective of the use of ergot, which is occasionally unavoidable. The wonderful power of the uterine contractions under the influence of ergot is best appreciated by those whose hands have been subjected to the pressure. In proportion as ergot is used does the distention of the perinæum become unmanageable, and the liability to its serious injury increase. Too little attention is paid to the fact that in lingering labor the maternal passages are hot and dry, and unprepared for the rapid and forcible expulsion of the child. More or fewer abrasions of the mucous lining cannot fail to occur, over which the lochia must flow, and through which septic matter may be absorbed into the circulation of the mother, and prejudice her chances of recovery, while lacerations of the cervix generally escape detection until long afterwards, when their ultimate effects have impelled her to consult her physician.

The writer feels that he cannot too strongly urge the importance of withholding ergot during the entire period of dilatation and subsequent expulsion of the child. Exceptions will be taken to this total prohibition by men of experience who claim immunity from accident. Granting that these claims are sometimes well founded, the facts yet remain that ergot is daily given before the cervix is fully dilated; that rigidity and laceration often follow the sudden and continuous impingement of the head upon it; that the drug is often and repeatedly given to save time or through deference to the wishes of the patient, and before any disproportion of diameters can be accurately ascertained. The gauntlet of impaction, the forcible passage of a large head through a small pelvis, pelvic phlegmasiæ, sloughing, septic absorption, etc., must inevitably be run.

In view of all this and more which might be pointed out did time serve, we are confronted by this question, Do the benefits arising from this use of ergot compensate for the risks incurred? But little notice has yet been taken of idiosyncrasy. In one case the writer has seen the ordinary symptoms of collapse follow the use of a moderate dose of ergot before delivery of the placenta, accompanied by a tonic contraction at the neck of the uterus, which effectually prevented its accomplishment for several hours. Within a few years several similar cases have been reported in the journals, but whether this is an important factor in the production of the deplorable results sometimes following the exhibition of ergot requires further demonstration.

Considering the action of ergot upon the circulatory system, an enfeebled or diseased heart would appear to be a contra-indication to its use which is universally ignored. Cazeaux emphasizes the dangers to the mother, while Schröder argues that the persistent contraction of the uterus induced does not materially aid the dilatation of the soft parts, and disputes its efficacy as an expulsive agent. Barnes bears testimony to the unreliability of ergot, and its tendency to add to the already existing depression of the patient. Men of large observation and experience assert that ergot is

¹ Eberle, *Mat. Med.*, 1825.

treacherous if used to prevent impending hæmorrhage, and that the exhausted condition of the uterus which succeeds such violent contractions sometimes predisposes to the emergency feared. Meigs does not give ergot for its expulsive effect, but prefers the forceps. Though abuse may grow out of the use of the forceps as well as of ergot their employment presents marked advantages over the latter. A case which is suitable for ergot admits of their application; the liability to lacerations is materially lessened; the progress of the child is under control; the risk of asphyxia is obviated, and its safety is assured.

The danger to the child under the use of ergot can no longer be underestimated. Whether a poisonous effect is produced, as has been claimed, cannot yet be definitely stated, but the tendency to tetanic contractions with prolonged pressure upon the placenta or funis seriously interferes with the oxidation and decarbonization of the foetal blood, and imperils the life of the child. If Churchill¹ be followed, who allows ergot to be given when the breech presents, how can this danger fail to be materially increased when the placenta is firmly compressed between the unyielding head and the uterine wall?

Spiegelberg insists upon the necessity of carefully observing the foetal heart after the use of ergot, in order that the forceps may be immediately resorted to in threatened asphyxia. That this is often done may well be doubted. Benicke reports twenty-seven cases in which ergot was given during the second stage on account of uterine inertia. Spontaneous delivery occurred in but seven of these cases. It should be axiomatic with every practitioner that economy of his own time never justifies the use of ergot, but beyond every private and selfish consideration he cannot escape the responsibility imposed by a knowledge of its unreliability, its manifold dangers, and the frequent necessity for instrumental interference.

The routine practice of many physicians of giving a drachm of ergot as soon as the head is born is also open to objection. It sometimes locks up the placenta so tightly that only time, chloroform, or nitrite of amyl will release it. Personal observation leads the writer to this conclusion, although practitioners of much larger experience doubt its possibility, asserting that it has never occurred to them. This contingency, however, has long been recognized. An author, writing so long ago as 1835, says: "An overdose of ergot may produce such contractions of the uterus after delivery as to cause retention of placenta." To show that this is not an antiquated thing which has long been exploded, we may quote from so recent an author as Lusk, who takes advanced ground and represents a growing sentiment against the routine and indiscriminate use of this agent.

After prohibiting its use in the second stage of labor, except as a prophylactic against post-partum hæmorrhage, he says: "The only imperative use of ergot is in post-partum hæmorrhage, resulting from uterine atony; but even then it should be withheld until after the expulsion of the placenta, lest the uniform uterine contractions lead to its prolonged retention or interfere with manual efforts for its extraction."

Because of this peculiarity in the action of ergot it cannot be relied upon in the management of abortions and miscarriages. It is after the uterus has been completely emptied of its contents, and for a varying de-

gree of time after delivery, then, that ergot, in the opinion of the writer, meets its proper and strongest indication. No physician should attend a case of labor without having ready to hand hot water and a solution of ergotine, with appropriate syringes prepared for instant use, should hæmorrhage occur after complete evacuation of the uterus. Post-partum hæmorrhage is thus robbed of half its terrors.

One of the most frequent indications for the use of ergot is subinvolution of the uterus. It has long seemed to the writer that appropriate prophylactic treatment, provided it could be applied, would greatly reduce the number of these cases. This treatment, which is found to be impracticable without the hearty coöperation of the patient, should begin from the moment the third stage of labor is completed. At this time, when the uterus has thrown off the burden which it has carried for nine months, the organ weighs, according to Heschl, from twenty-two to twenty-four ounces; and its length, according to Bömer, who has measured in sixty-four cases, averages a little more than six inches. Hewitt gives the length as eight inches. At the end of the first week, at which time women often get up, the uterus weighs from nineteen to twenty-one ounces; at the end of the second week, from ten to eleven ounces; at the end of the third week, from five to seven ounces, and the nearest possible approach to the normal weight of about two ounces is not reached until the close of the second month. The new mucous lining of the organ does not form before the third week. We must dissent, then, from the views of an eminent writer, if, as reported, he advocates the encouragement of the patient to rise and dress on the third or fourth day after delivery in ordinary cases. The writer ventures the opinion that this time for keeping the bed or lounge is much too short. Indeed, the time-honored period of nine days does not seem long enough. At this time, even, although the bulk of the uterus is considerably reduced, we have seen that it yet remains enlarged, soft, congested, and too heavy for its relaxed supports. Walking, standing, lifting, pelvic inflammations, etc., contribute to retard the process of involution, in many cases entirely arresting it short of completion, when we have resulting the condition of subinvolution, the grand predisposing cause of that long train of symptoms so familiar to the physician. Have we not here a clear indication for prophylaxis?

The patient should not only be kept longer in bed to facilitate involution, but we shall do well to remember that it is the soft, spongy, subinvolved uterus for which Bartholow recommends ergot. Believing that the process of involution is materially aided and advanced by the cautious use of ergot, it is the practice of the writer to give it in moderate doses for some days after delivery. Corroborative evidence of the value of this plan of treatment is not yet abundant, but Dr. Garrigues, of New York, may be quoted upon the use of ergot as follows: "Ergot ought never to be given during labor. I use this drug in every labor, but not until after the placenta has been expelled. I give it even for four or five days, because I think that by causing contraction of the muscular coat of the blood-vessels it counteracts absorption of septic matter, and by increasing uterine contraction insures good involution." The abuse of the use of ergot is by no means confined to the profession.

The late William Warren Greene once urged upon

¹ System of Midwifery.

a class of students the propriety of using the simplest language with their patients, but recommended the invariable employment of scientific language among themselves. Some exceptions might reasonably be taken to the first injunction. We should all realize the wide-spread tendency to escape the dangers and responsibilities of maternity. Women are in constant temptation to seek means and use them privately to accomplish their object. Frequently we find them in the cities using ergot with the avowed intention of procuring an abortion. To all inquiries, from whatever source, concerning the nature and effects of ergot guarded answers should be given,—not necessarily false, but calculated to divert the mind from its ebolic properties, and the botanical name only should invariably be given, as less likely to be remembered than the common one.

The unreliability of ergot has caused great annoyance. Camphor prevents much deterioration of the powder, but a fresh preparation is more reliable. The addition of one per cent. of acetic acid renders the liquid preparation permanent.

As it is sometimes desirable to give ergotine for several weeks in succession, it becomes not only an interesting but important question as to how long the remedy can be given with safety. Doubtless no fixed rule can be laid down; but as some evidence can be advanced to show that ergotine has a cumulative effect upon the system, prudence would seem to dictate conservatism.

At a meeting of a medical society in Paris some time since Dr. Boissarie called attention to the possible dangers attending the prolonged administration of ergotine by the mouth. He detailed the case of a young woman of twenty-five, with albuminuria, who took a daily dose of two centigrammes of ergotine for four weeks. About a month after cessation of treatment gangrene developed in both inferior extremities.

Dujardin-Beaumetz relates a case of enteric fever in which gangrene supervened after the exhibition of a daily dose of one gramme of ergot for one month. A case of pulmonary gangrene in a child of thirteen years has also been reported. Ergotine, in a daily dose of two centigrammes, was given by the mouth for about two months for incontinence of urine. Fatal hæmorrhage occurred within a month after cessation of treatment.

Dr. Lusk, of New York, reports a case of fibromyoma of the uterus treated by ergotine injections into the subcutaneous tissue of the abdomen over the tumor. The bulk of the growth was rapidly reduced, but at the expense of gangrene of the compressed tumor and fatal septicæmia.

CEREBRAL ERYSIPELAS.¹

BY AUGUSTUS P. CLARKE, M. D. (HARV.)

I was called Thursday, March 10, 1881, to visit S. P. S., aged fifty-one years, who was then suffering from severe headache. The pain complained of was on top of the head. There was some soreness of the throat, probably from swelling and tenderness of the lymphatic glands of the neck. There was no pain in deglutition. The pulse was 110 per minute; the temperature was 102.2° F. There was some swelling

about the nose, which was red, and hot, and painful. The face, and ears, and scalp were also affected. The patient, the night before, had suffered from the effects of a severe chill, and at the time of my visit he complained of being chilly, or, rather, preferred to be in a warm room. Tongue coated. There was very little nausea, but no vomiting. The cold evidently appeared to be an acute attack of erysipelas. The patient was a tall and rather stout man. Hair turned gray. Recently he had been employed as a private policeman for night service, but on returning home in the morning was unable to obtain sufficient sleep; the rooms of his apartment or dwelling were too much crowded for quietness necessary for good sleep. He had from time to time suffered with some trouble with his stomach; was somewhat dyspeptic, and had occasionally complained of uneasy sensations in the cardiac region, but nothing serious was apprehended by himself or friends. At the time I was called he had had no movement of the bowels for some two days, so I prescribed saline laxatives and refrigerating drinks; also prescribed ung. petrolei and boracic acid, four grammes of the latter to thirty-two of the former, to be applied to the swollen parts of the face. Next morning, the 11th, patient wrote me a note in regard to his condition. He stated that the saline mixture had operated but slightly, but that he thought he was "a little better." He asked whether he should continue the saline aperient. He was up and around the house somewhat during the day; he also rested on a lounge in his sitting room. While reclining on the lounge about twenty minutes of seven P. M., the 11th, he was noticed, on a sudden, to be convulsed, that is, "his mouth was drawn to one side," as an attendant remarked who stood near him at the time, and he immediately began to snore with slow and irregular respiration; he was unconscious, and appeared to be in a dying condition. I was at once sent for, and I reached his house twenty minutes past seven, when the patient was evidently dead. The pupils were widely dilated, the eyes fixed. There was no action of the heart; hands cold, and face on left side becoming purple. There had been erysipelas in his family some three months before. His daughter then suffered from a severe attack of erysipelas of the face and head.

Autopsy of the body of S. at four P. M., the 12th. Present Drs. Holt, Clarke, Dow, and Bryant. Rigor mortis well marked. Body well nourished and developed. The head was first opened. No marked adhesion between the cranium and dura mater. The vessels of the pia mater were of a bright-red color, so much so as to be especially remarked by all. The vessels of the pia were somewhat injected. On removing brain no clot was found in it. The vessels at the base and other parts appeared similar to the others just described. There was no embolus nor thrombosis in any vessel of that organ. There was no softening nor anemia from the presence of emboli of the carotid or other artery or vessel. There was, however, some serum under the arachnoid (more than normal). The lungs, liver, kidneys, and spleen were all heavily engorged with dark blood. The heart was pale, and perhaps a little softer than normal, and fatty; the valves were healthy, and seemed capable of further duty. The stomach and duodenum on opening were darker than normal, though no ulcers were observed. There was a great amount of fat deposited about the intestines and omentum. The abdominal parietes were very thick

¹ Read before the Cambridge Society for Medical Improvement, February 27, 1882.

with fatty tissue. Neither the œsophagus nor the stomach nor duodenum exhibited any traces of corrosive or irritant substances which had acted on these parts. The sudden death must have been in consequence of the gradual accumulation of serum under the arachnoid. This must have taken place during Thursday and Friday, and after reaching a certain quantity, in connection with a feeble heart (fatty) and an altered condition of the blood on the nervous centres, immediately arrested the functions of the brain.

J. Russell Reynolds, F. R. S., in his *System of Medicine*, under the heading of Prognosis of Erysipelas, thus remarks: "In some instances there are symptoms of 'meningitis' observed during life, and evidences of its presence and its results may be discovered after death, but in others the cerebral symptoms are those of oppression rather than excitement, and the post-mortem appearances are those of effusion only, or of that embolic occlusion of vessels described by Dr. Bastian. In the latter class of cases the symptoms are probably due partly to the direct effect of altered blood upon the nervous centres, and also to the indirect effect of that alteration in leading to possible effusion or unobstructed circulation." In the case reported there was no evidence of "meningitis," nor were there any evidences of embolic occlusion whatever, only a very limited amount of effusion beneath arachnoid. The revelations made by the autopsy were rather negative than otherwise. During life there were no marked symptoms of oppression as referred to by the author above cited, nor were there any very marked ones of excitement. The pulse was only 110 and full, and the temperature not above 102.2° F. at the time of my visit. Watson, in his *Lectures on the Practice of Physic*, remarks that erysipelas may prove fatal "by effusion within the head and coma." He also remarks that the patient may die of apnoea, sometimes almost suddenly, unexpectedly. The solution of the mystery may be discovered sometimes by examining the throat, when the submucous tissue of the glottis or epiglottis will be found filled with serum or pus, and the chink of the larynx being nearly or completely closed. But on examining the œsophagus for the effects of irritant poisons in the case reported no such appearances were observed either in the throat or in the submucous of the larynx or glottis. Many authors remark that where erysipelas of the face and scalp occur inflammation of the membranes of the brain is liable to be produced, and that coma may follow the supervention of serous effusion within the cranium. In vol. xci. (1874) of the *Boston Medical and Surgical Journal* Dr. J. C. Gleason, of Rockland, Mass., says: "In the large proportion of fatal cases (of erysipelas) death is owing to failure of the vital powers as a result not of the inflammation, but of a true blood poisoning by morbid atoms, the toxic character of which is not yet fully known." He conjectures that the principle of the contagium or infection acts as a ferment, as in other zymotic diseases, and that it is a catalytic agent capable of inducing changes or alteration in the composition of the blood. Holmes, in his *System of Surgery*, vol. i., under Prognosis of Erysipelas, remarks: "It is in the head and in the limbs that injuries most tend to excite the inflammation. In the head it is most specially liable to occur both symptomatically and idiopathically, and should never be regarded otherwise than as a serious disease from the disposition which exists to congestion of the membranes of the brain,

and to spreading inflammation in the fauces and air-passages."

Huguenin, in Ziemssen's *Cyclopædia of the Practice of Medicine*, vol. xii., p. 453, speaking of hyperæmia as an affection of the pia mater, and "inflammations about the head," observes, that "erysipelas may be taken as the prototype of this class. Headache, mental confusion, excitement, anxiety, photophobia are the symptoms of the cerebral fluxion usually observed, and they may become very intense. Delirium of every variety and every degree of intensity may occur, and the restlessness may gradually change into coma, while the temperature often ranges quite high. Some may attribute this termination to the elevated temperature alone; usually cerebral hyperæmia is the only lesion found, but we are convinced that accurate observation will in the future demonstrate more essential anatomical changes." In a foot-note a case is mentioned "where death occurred with the above-mentioned symptoms, the pia mater was perfectly normal, but migration and a small extravasation of white blood corpuscles were found in the white substances of the hemispheres, exactly like what is seen in certain stages of dementia paralytica." The same author states that "the congestion of erysipelas does not terminate in a purulent meningitis. The meningitis of the convexity, which not infrequently complicates erysipelas, we believe to be metastasis, and have only observed it where there was suppuration." Huguenin fails to mention the occurrence of effusion under the arachnoid and its gradual accumulation within the cranium. But he refers the termination of the case to the elevated temperature and to cerebral hyperæmia, and to the migration and extravasation of white blood corpuscles found in the white substance of the hemispheres. In the case reported the temperature was not greatly elevated, nor was the hyperæmia very marked.

Niemeyer, in his text-book of *Practical Medicine*, vol. ii., p. 416, says: "Erysipelas is sometimes complicated with intestinal or with bronchial catarrh, sometimes with intense hyperæmia of the kidneys, and with catarrhal or croupous inflammation of the uriniferous tubules. A far more serious but less common complication is the extension of the inflammation from the scalp to the meninges. The so-called 'striking in' of the erysipelas is a consequence of the malignant character of the disease, and of incipient collapse, and is not to be regarded as the cause."

Da Costa, in his *Medical Diagnosis* (second edition), page 723, speaking of erysipelas, says: "In some cases the inflammation extends to the brain, and instead of the wandering at night, always a very common symptom, we have violent delirium, soon succeeded by coma and rapid sinking. In other cases, again, and they are generally very bad ones, we may find these active cerebral symptoms, and yet not be able to detect after death signs of inflammation in the brain or its membranes."

Tanner, in his *Practice of Medicine*, page 288, states that "erysipelas now and then proves fatal by the extension of the inflammation to the brain or its membranes, giving rise to effusion and coma." He also states that the failure of the vital powers may be a cause of death in such cases." In the *Medical and Surgical History of the Late War*, Part I., Surgical Volume, pages 77 and 101 and 185, mention is made of erysipelas as occurring in gunshot scalp wounds and

contusions of the cranial bones and gunshot depressed fractures of the skull. Such complication was, however, comparatively rare, as there are only three such cases reported in the 363 cases of depressed gunshot fractures of the skull. Only twenty-two cases of erysipelas supervening after gunshot wounds limited to the integuments of the cranium are reported; eight of these terminated fatally. The precise features of these secondary complications are not reported. The author of this great work infers from the prescriptions used that meningitis or some form of encephalitis must have supervened that induced the fatal results. This is very doubtful, as the autopsy of but one case is mentioned, and the report only states that "the liver, spleen, and mesenteric glands were found enlarged."

Aitken, in his *Science and Practice of Medicine*, vol. i., p. 339, says that: "Extension of the inflammation to the membranes of the brain sometimes takes place, while the external inflammation continues. This untoward event is followed by delirium and coma. But delirium frequently supervenes in the course of erysipelatos attacks, independently of any metastasis or extension of the disease to the membranes of the brain." He also says fatal cases terminate by coma, and with dissipated habits, or in dilapidated constitutions, the delirium resembles that of delirium tremens not due to inflammation of the brain, but in consequence of an altered condition of the blood and of the nervous system." He cites Barclay in support of this last remark. It will also be remembered in the case reported that there was no marked delirium resembling that of mania à potu, and positively there was no coma. The death was sudden and unexpected, just as Watson says a case may so terminate, though not by apnoea, which is sometimes the cause, according to this last authority. The patient formerly had been of irregular habits, and his constitution had greatly been impaired. As nearly all authorities agree that an altered condition of the blood by certain morbid or toxic atoms is always an important factor in such cases, it seems but reasonable to infer that the sudden death must have been due, as said before, to the gradual accumulation of serum under the arachnoid. This must have been going on during Thursday and Friday, and after attaining to a certain quantity, in connection with a feeble heart and an altered state of the blood, immediately arrested the functions of the brain.

SURGICAL TREATMENT OF HOPELESS CASES OF MASTURBATION AND NOCTURNAL EMISSIONS.

BY TIMOTHY HAYNES, M. D., CONCORD, N. H.

LIKE many others in general practice I am frequently called upon to care for the victims of self-abuse.

While I always strive to help this perverted state of the mind by advice and treatment, by counseling marriage, perhaps, and at times even the immorality of a mistress, still there are cases so utterly desperate, so destroyed mentally and physically, that I have been led to face the question, Cannot help be given at the expense of the procreative powers?

The scar of castration is a stigma.

It was with a view of avoiding this deformity that I was led to remove parts of the spermatic ducts in place

of the testicles. The operation, which was the same in all three cases reported below, was as follows:—

An incision midway between the external inguinal ring and the testis laid bare the duct, from which a half inch was resected, and the slight wound closed by sutures.

CASE I. E., aged eighteen, a confirmed masturbator, was admitted to the New Hampshire Asylum for the Insane September 4, 1843, and discharged relieved the 25th of March following.

Readmitted July 2, 1845, and discharged October 2d.

His condition seemed to be beyond medical aid, and I was asked to see him to consider the feasibility of castration. I advised resection of the duct, which was assented to, and I did the operation according to the above method.

The patient, living in a distant part of the State, passed out from under my own observation after the operation. From others I learn that while he never fully recovered from his demented state, still he was so far relieved by the treatment that he became a very useful farm hand.

He died in 1881.

CASE II. Mr. L., aged thirty-six, had been addicted to masturbation and had suffered from nocturnal emissions for several years. His mind was so disordered as to render him totally unfit for any business. Starting on a journey, he was more than likely to turn up miles from the place he intended to reach.

I operated March 21, 1872. This patient lives near me, and has been kept under observation.

Soon after the operation he began to improve in flesh and strength, and is now a correct, healthy business man. His testicles are normal as to size and appearance, but the sexual desire is entirely destroyed.

CASE III. I was called July 27, 1878, in consultation to see Mr. S., aged thirty, who had practiced self-abuse for years, suffered from nocturnal emissions, and was such a physical wreck that he was unable even to walk without assistance.

When seen he was much emaciated, and had been confined to his room for months. While he could hardly be classed as insane, still his mind was evidently impaired, and at times it was difficult to get him to take sufficient food.

I resected the ducts, and learn from his physician that he improved greatly in flesh and strength after the operation.

He died February 22, 1882, without medical attendance.

By this simple operation, leaving behind it no deformity of the genitals, we have succeeded in all three cases in improving the mental and physical condition of our patients, while the sexual appetite was as effectually destroyed as by castration.

RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

SYNTHESIS OF URIC ACID.

M. HORBACZEWSKI¹ has prepared uric acid synthetically in the following manner: Pure glycochol was finely pulverized and mixed with ten times its weight of pure urea, prepared from ammonium cyanate, and

¹ Journal de Pharmacie et de Chimie, January, 1883, page 70, from Berichte der Deutschen Chemischen Gesellschaft, 1882, page 2678.

the mixture heated in a flask placed in a metal bath at 200° C. to 230° C., till the liquid, which was at first clear and colorless, became thick, turbid, and brownish-yellow. The resulting product when cold was dissolved in dilute potassium hydrate, and, after supersaturation with ammonium chloride, was precipitated with a mixture of ammoniacal silver solution and magnesia mixture. The precipitate thus obtained was washed with water containing ammonium hydrate, and decomposed with potassium sulphide. The silver sulphide was removed by filtration, and the filtrate, after acidulation with hydrochloric acid, was concentrated on a water-bath. The crude uric acid thus separated was purified by familiar methods, whereby finally a yellowish crystalline powder was obtained, exhibiting the same crystalline form, the same elementary composition, and the same reactions which are characteristic of the uric acid obtained from urine.

PARAXANTHINE.

G. Salomon¹ describes the method of extraction and the properties of a new constituent of normal human urine to which he has given the name "Paraxanthine." It is distinguished from guanine, xanthine, and hypoxanthine by its reaction with sodium or potassium hydrate. The addition of either of these reagents to a concentrated solution of paraxanthine produces a crystalline precipitate, which dissolves on the addition of warm water, but separates out again when the liquid cools.

GENESIS OF PTOMAINES.²

These bases were originally regarded by Selmi, and afterwards by Schwanert, as exclusively products of cadaveric putrefaction. Selmi, however, afterwards modified his opinion so far as to admit that, in cases of serious pathological alterations, they might be produced in the animal organism during life, a conclusion fully confirmed by Spica. Finally the question was further modified by the experiments of Paternò and Spica on blood and on egg-albumen, and by those of Gautier on normal urine, all of which showed that reactions similar to those above alluded to may be exhibited by perfectly healthy animal fluids.

To throw further light on this question Coppola has made a series of experiments on the physiological action of bases extracted from the blood of a healthy dog; and his conclusions are that alkaloids extracted from healthy animal fluids, carefully protected from putrefactive alteration, may exhibit strong toxic properties, and that consequently whatever idea may be formed of the nature of the putrefactive process, the albuminoids must be capable of undergoing certain transformations, which may give rise to the formation of poisonous alkaloids. This being the case, it becomes a question whether among these transformations should be included those which albuminoidal substances undoubtedly undergo in the extraction of alkaloids by Dragendorff's process; for if this be the case, it might be alleged that the ptomaines are merely products of the decomposition of the albuminoids, brought about either by chemical reagents or by putrefaction, either during life or after death; and until some process of extraction shall have been devised in-

capable in itself of giving rise to the production of such alkaloids, no satisfactory proof can be given of their presence in the normal animal organism.

Coppola, in continuing his experiments on this subject, arrives at the following conclusions:—

(1.) Arterial blood in its normal state does not contain any substance of alkaloidal nature.

(2.) In the decompositions which albuminoids undergo during the process of extraction by the methods of Dragendorff and of Stas-Otto, toxic principles are formed which exhibit the reactions of alkaloids. These conclusions throw great doubt on all experiments hitherto made on the genesis of ptomaines, since the extraction of these bodies either from cadaveric substances or putrefaction products, or from liquids pathological or physiological, is always effected by one or other of these processes, or by some method chemically equivalent thereto. Moreover it is impossible to say how far the formation of such products is influenced by putrefaction, cadaveric or ordinary; and, indeed, notwithstanding the conclusions of Gautier and Étard (who extracted, from putrid animal matter, two liquid alkaloids) it may even be regarded as doubtful whether putrefaction alone is capable of giving rise to the production of ptomaines.

STRYCHNIA.

Dr. J. Kratter³ has made a number of experiments to determine the manner in which strychnia is excreted from the body, and if it is chemically decomposed or not. The results of these experiments are as follows. Strychnia, no matter how introduced, is rapidly absorbed and excreted, totally unaltered, by the urine. The excretion begins within the first hour after the introduction of the drug into the system, and is ended, latest, within forty-eight hours, when the last trace of the whole dose can be demonstrated in the urine. The idea of some that strychnia is deposited in the liver is not tenable, neither is it probable. Any accumulative action may be explained by the fact that a new irritant acts on the nerve centres, the former irritation of which has not totally ceased and equilibrium not having been reestablished, before another dose disturbs it anew.

Mr. Mecredy⁴ relates a very interesting case of strychnia poisoning in which the symptoms were delayed eight hours by opium. The patient, a stout, healthy-looking, well-developed woman of twenty-three years of age, and in the sixth month of pregnancy, took, according to her own statement, a packet of Battle's vermin-killer and immediately thereafter two ounces of laudanum. Four hours later she was first seen by Mr. Mecredy, and was then unable to stand without assistance, or to give any further account of herself than that she had taken poison with suicidal intent. Her face was pale and ghastly, and she presented in every respect the appearance of one suffering from opium poisoning, with the exception that the pupils were little, if at all, contracted. Copious emesis was induced by the free administration of zinc sulphate, and maintained by draughts of hot water, coffee, and mustard-and-water. The vomited matters consisted of fruit, and had only slightly the odor of opium. Symptoms of strychnia poisoning did not begin till four hours after

¹ Berichte der Deutschen Chemischen Gesellschaft, 1883, pages 195-200.

² Journal of the Chemical Society, London, 1883, pages 522 and 624, from Gazzetta.

³ The Medical and Surgical Reporter, November 18, 1882, page 583.

⁴ Edinburgh Medical Journal, February, 1883, page 757, from the Lancet, 1882, vol. ii., page 724.

the patient was first under medical observation, and eight hours after the dose had been taken. The symptoms, which were greatly obscured by the effects of the opium, were at first slight, being in the form of clonic movements of the hands and in a lesser degree of the feet. Later they increased in extent and degree, extending to the arms, shoulders, and legs, accompanied by slight opisthotonos and considerable pain at the pit of the stomach, but with no trismus, and with but little twitching of the muscles of the face. Four hours after the twitching had begun forty grains of chloral were given, and an hour later, when the symptoms of the opium had greatly disappeared, thirty grains of chloral were given, and a like amount every hour for three hours. The symptoms of strychnia reached their maximum five hours after their commencement, and had almost completely disappeared five hours later; the patient being thus almost well within eighteen hours from the time of taking the vermin-killer and laudanum.

Mr. Mecredy estimates the quantity of strychnia taken at a grain and a half, and calls attention to the delay in the appearance of the symptoms, and to the antagonism between strychnia and opium; the former preventing the contraction of the pupils, and the latter neutralizing, for a time at least, the effects of strychnia on the cord. In conclusion, the practical bearing of the case is alluded to, — opium being recommended for use more freely than is now the custom in cases of strychnia poisoning when chloral and the other usual antidotes are not at hand.

[It is well known that the effects of strychnia may be much modified by the presence of opium. A case is recorded¹ in which three grains of strychnia and one drachm of opium were taken and no serious symptoms appeared for nearly twelve hours; death taking place forty hours after the mixture was taken. Mr. Mecredy's case is considered worthy of a notice in this report because it is only by a comparison of well-authenticated and carefully reported cases that we can learn how far the ordinary symptoms of one poison may be modified by the presence of other substances. — REP.]

ARSENIC.

M. Garnier² has investigated the question of the localization of arsenic in various organs and tissues, and has arrived at the conclusion, from his own experiments, that the liver is the organ in which the poison accumulates to the greatest amount in both acute and chronic arsenical poisoning. Relatively small quantities could be extracted from the brain when large quantities were obtained from the liver.

METHODS OF DETECTING LEAD, SILVER, AND MERCURY IN THE BODY IN CASES OF POISONING.

V. Lehmann,³ after discussing the literature of the subject, describes a series of quantitative experiments in which the delicacy of various processes which have been employed for the detection of these metals is put to the test.

As regards lead, the sensitiveness of certain reagents was in the first place determined. Sulphureted hy-

drogen in alkaline solutions proved the most delicate reagent, giving a precipitate with one part of lead nitrate in ten million parts of water.

In the examination of the organs of the body and of organic fluids, such as urine, it is necessary first to destroy all organic matters by hydrochloric acid and potassium chlorate, otherwise the separation of lead takes place incompletely or even not at all.

In the separation of lead in this way electrolysis yielded results as favorable as those obtained with sulphuretted hydrogen. The method employed was to place the solutions freed from organic matter and acidulated with hydrochloric acid in a bell-jar, closed below by means of parchment paper, and placed in very dilute sulphuric acid. The positive electrode from a battery of three small copper-zinc couples dipped into the solution lying on the parchment diaphragm, on the other side of which lies the negative electrode. Both electrodes were of platinum foil. After twenty-four hours the lead deposited upon the positive electrode was dissolved by boiling with dilute nitric acid, the solution evaporated to dryness, and the residue redissolved in water with addition of sodium hydrate. It was then tested by sulphureted hydrogen in the usual way. For the quantitative determination of lead under these circumstances Lehmann adopts the colorimetric method of G. Bischoff, using sulphureted hydrogen in an alkaline solution.

After the administration of salts of lead the metal may be detected in the urine and all organs of the body. In the case of rabbits to which lead had been given in doses of three to four milligrammes daily traces of it were found in the urine after the first day. The greater portion of the lead is deposited in the tissues, and after four or five days, while mere traces are discernible in the blood, large quantities are found in the heart, lungs, kidneys, brain, and bones.

For silver hydrochloric acid is the most sensitive test. The separation of silver by hydrochloric acid from solutions containing salts and organic matters is not complete, as, for instance, from the urine which holds alkaline chlorides in solution, these latter dissolving in part silver chloride. In such cases and in the organs of the body organic matters must first be destroyed by fusion with potassium nitrate and sodium hydrate. From the residue left after extracting the salts by water the reduced silver is dissolved in nitric acid, filtered, evaporated, redissolved in water, and precipitated by hydrochloric acid. Other methods of determining silver give unsatisfactory results. By the above method silver was detected in sixty cubic centimetres of the urine of a rabbit, under the skin of which eighteen milligrammes of silver nitrate had been injected. Similarly, after subcutaneous injection in eight dogs of forty-eight milligrammes, silver was detected in the urine and liver.

Mercury is found in cases of poisoning in all the tissues and secretions of the body. The author considers the methods of Schneider and of A. Mayer as alone yielding accurate results. In Schneider's method the substance under examination is freed from organic matters by means of potassium chlorate and hydrochloric acid, and the filtrate subjected to electrolysis, the mercury being best deposited on a gold electrode, which Lehmann found to give more sensitive results than copper. The deposited mercury is then converted into iodide, for which purpose the electrode is introduced into a glass tube drawn out in a capillary bore

¹ Wormley's *Micro-Chemistry of Poisons*, page 40, from *Chicago Medical Journal*, November, 1880.

² *The London Medical Record*, June 15, 1883, page 243, from *Ann. d'Hygiène*, vol. ix., p. 310.

³ *Journal of the Chemical Society*, London, 1883, page 687, from *Zeitschrift für Physiologische Chemie*, vi., pages 1-42.

at one end, and sealed at the other. The latter part being heated the resulting sublimate is driven into the capillary portion, which with a bulb-shaped part of the wide tube is then cut off before the blowpipe. This latter part is opened, and some iodine being introduced, is again closed. The iodine vapor penetrates the capillary end, and changes the mercurial sublimate to iodide. According to Lehmann the sensitiveness of the test is heightened if this reaction takes place in a slow current of air while the gold electrode is cautiously heated, and the mercury volatilized in presence of iodine. In this way 0.1 milligramme of mercuric chloride may be detected in one hundred cubic centimetres of urine.

Mayer's method, by which the mercury is distilled in presence of steam, is even more sensitive. Urine or the finely divided organ diluted with water is mixed with slaked lime and solution of potassium hydrate in a flask having a capacity of about three times the volume introduced. A U tube filled with glass wool moistened with silver nitrate is connected with the flask, and both are heated in a calcium chloride bath to 130° C. or 140° C. The glass wool is afterwards inserted in a tube and the mercury converted into iodide. A two per cent. solution of sodium chloride may advantageously replace the water used in this method, frothing being avoided, and the mercury more rapidly volatilized. By this method 0.1 milligramme of mercuric chloride may be detected in one litre of urine.

After subcutaneous injection of mercuric chloride to the amount of three or four milligrammes daily for five days in a rabbit mercury was found in greatest amount in the heart, lungs, liver, and muscles, least in the brain, bones, and urine.

DESTRUCTION OF TISSUES.

P. Jeserich¹ recommends chloric acid in place of hydrochloric acid and potassium chlorate for the destruction of organic substances as a preliminary to their examination for inorganic poisons. The organic matter is finely divided and mixed with water to a thin paste, the chloric acid is then gradually added in small quantities, and the mixture carefully heated on a water bath. The mass swells up after a short time, and assumes a fungus-like appearance. If hydrochloric acid is then added in small quantities chlorine is set free, and acts rapidly upon the organic matters. Further treatment is similar to that employed in the ordinary process with hydrochloric acid and potassium chlorate.

Care must be taken that chloric acid is always in excess in order that lower oxidation products, which might be formed, shall not be volatilized, and also that concentration is not carried too far, otherwise the energetic action of the chloric acid upon the organic matter may give rise to slight explosions accompanied by flame.

By making use of chloric acid the presence of a large amount of potassium salt, which is introduced into the substance under examination when hydrochloric acid and potassium chlorate are employed, is avoided, and the liquid thus prepared may be tested for an excess of potassium salts in cases of poisoning with such substances as potassium oxalate.

¹ Archiv der Pharmacie, February, 1883, page 125, from Repert. der Anal. Chemie, 1882, No. 24.

Hospital Practice and Clinical Memoranda.

RHODE ISLAND HOSPITAL.

REPORTED BY DR. G. W. ALLEN, HOUSE SURGEON.

SURGICAL CASES. SERVICE OF DR. G. W. CARR.

OBSCURE ABDOMINAL TUMOR.

CASE I. T. McD., aged thirty-three, admitted to hospital November 28, 1882. Five weeks ago was caught between two freight cars and received injury to abdomen. He vomited a great deal at the time, and had severe pain in the region of the heart. Since then has been confined to his bed with pain and great weakness.

Physical examination shows hardness of abdomen just below the ribs on the left side. Pulsation of aorta quite distinctly transmitted to slight pressure.

December 9th. At times since admission he has had considerable pain, lancinating in character, in the cardiac region. Relieved by poultices. Has also begun to have fluctuations of temperature, which he did not have when he came in.

December 12th. Examination shows an oblong fluctuating tumor extending from the left hypochondrium to about two inches to the right of the umbilicus and nearly to the crest of the left ilium. Pulsation of aorta transmitted. Aspirated three inches to left of umbilicus and two inches above crest of ilium. Needle introduced about one fourth of an inch. Ninety-two and a half ounces thin, reddish-brown, odorless fluid drawn off, of specific gravity of 1020, containing albumen one half per cent., and red blood corpuscles; urea absent. Patient much relieved, but quite prostrated. Soon recovered, however. Compression applied.

December 13th. Feels very much better. Appetite improved.

December 17th. Has gained strength daily, and is up and about.

December 19th. Slight pain and fluctuation on left side. Rest in bed and compression ordered.

December 29th. The tumor has been gradually increasing, and is now as large and extends over the same area as when first aspirated. Aspirated again at same place. One hundred and seven ounces thin, dark-greenish, odorless fluid drawn off. Specific gravity of first part, 1014; of last part, 1010. Albumen one fourth per cent. Patient greatly relieved, and has little pain. Compression applied.

January 18, 1883. Has had no pain; has been improving steadily in general condition since the last tapping and now feels quite well. Dullness and fluctuation over a small surface about the umbilicus.

February 13th. Has continued improving. No increase in size of tumor. No fluctuation. Pulsation of aorta still transmitted. Discharged relieved.

Was seen about a month later and reported that he still felt well, although unable to do hard work.

NECROSIS OF FEMUR. SUPPURATIVE ARTHRITIS OF KNEE.

CASE II. Alice M., aged twenty-eight, admitted to hospital October 13, 1882. There is a sinus discharging pus on the inner side of the thigh, lower third,

which she says she has had for a year. Has a great deal of pain. Dead bone is felt with the probe.

October 25th. Another sinus has opened on the outside of the thigh.

October 29th. Bagging of pus in the calf. Edema of foot and leg.

October 30th. Incision and counter-opening made in the calf, and drainage tube inserted.

November 6th. Free discharge of pus, and hectic fever.

November 19th. Swelling and pain in knee.

November 26th. Incision made at sinus on inside of thigh, and femur found eroded to the knee.

December 12th. Profuse discharge of pus continues from thigh and calf. Consultation. Amputation advised and refused. Free incision made in thigh, and drainage tube inserted.

December 17th. Patient has diarrhoea and suffers more pain.

December 27th. Diarrhoea has continued uninterrupted in spite of active treatment. Patient has been steadily losing strength, and is in a very low condition. Suppuration is increasing. Boils have broken out on the back.

December 28th. Thigh amputated five inches above the knee. Anterior and posterior flaps, Lister. Knee-joint and lower part of femur found diseased. Temperature after operation 97.5° F.; pulse 160. Several hypodermic injections of brandy given. Brandy by mouth not retained. Brandy and beef tea, one ounce of each, given every hour by rectum, but not retained. Later, small doses of brandy and wine whey retained by the stomach. Evening temperature 102.2° F.; pulse 160.

December 29th. Temperature 102.6° F.; pulse 160. Is in a very feeble condition, and complains of great pain. During the last twenty-four hours has taken wine whey thirty-seven ounces, brandy fifteen ounces, beef tea eight ounces, and has had seven dejections. Tannin and opium suppository after each dejection. Drainage tube syringed through every three hours with solution of carbolic acid, one to forty.

December 30th. Temperature 103.8° F.; pulse 164. Stitches and drainage tube removed, and stump dressed loosely with carbolized gauze. Takes a large amount of wine whey and brandy. Has had four dejections.

December 31st. Temperature, morning, 103.2° F.; evening, 102° F.; pulse 164. Sleeps very little. Diarrhoea, nausea, and vomiting. Stump syringed every three hours with solution of carbolic acid, one to forty.

January 1, 1883. [The case passed this day into the service of Dr. E. T. CASWELL.] Temperature, morning, 103.6° F.; evening, 100.8° F.; pulse 160. Gradually growing weaker. Diarrhoea no better. Nausea and vomiting have ceased. Takes nourishment and stimulants well.

January 2d. Morning temperature 102.4° F., pulse 164; evening temperature 99.8° F., pulse 140. Mind wandering. Diarrhoea, nausea, and vomiting. Stump is suppurating and looks unhealthy.

For the next three days temperature averaged about 100° F., and pulse 150. General condition no better.

January 6th. Diarrhoea continues. Vomiting has ceased.

January 9th. Improving.

January 10th. Very delirious during the night. Diarrhoea as bad as ever. Nausea and vomiting again. Temperature 100° F.; pulse 140, and varied but little from this for the next two weeks.

January 11th. Still delirious. Had nine dejections, four involuntary. No nausea nor vomiting. Stump looks badly.

From this time, under a liberal allowance of stimulants, the patient very gradually but steadily improved. Diarrhoea, nausea, and vomiting had ceased by the 18th. The stump soon cleaned off and healed quite rapidly, except a sinus, which remained open until a small piece of dead bone was removed several weeks later.

COMPOUND FRACTURE OF FRONTAL BONE.

CASE III. Mary C., aged nineteen, admitted to hospital November 21, 1882, was injured by jumping from the window of a burning building. There was a lacerated wound about four inches long above the left eye, at the bottom of which could be felt a fracture of the bone with the outer table depressed. No symptoms of compression. Wound closed with adhesive plaster, and dressed with iced phenyl.

November 22d. Nausea and vomiting. Patient nourished by enemata. Delirious at times.

November 25th. Takes nourishment by the mouth and retains it. No nausea. No head symptoms.

December 5th. The scalp wound has healed by first intention. Complains of pain and tingling sensations in the left leg from the knee to the toes, and there is tenderness on pressure over the lumbar vertebrae.

December 14th. Discharged improved.

Some weeks later was perfectly well, no spinal symptoms having developed.

SERVICE OF DR. E. T. CASWELL.

FRACTURES OF THE FEMUR.

CASE I. G. R. C., aged twenty-one, admitted to hospital February 5, 1883, fell out of a window and fractured his femur at the middle third, shortening one and one fourth inches. Put up in Buck's extension with a weight of twelve pounds.

February 24th. Passive motion of knee.

March 9th. Plaster-of-Paris spica, extending to the knee, applied.

March 10th. On crutches.

March 12th. Union not very firm. Patient put to bed again.

March 19th. Spica removed and made into anterior and posterior splints. Good union and position. Splints applied, and patient up on crutches. Passive motion of knee every day.

March 28th. Discharged well. Shortening one fourth inch. To wear the splints two weeks.

CASE II. P. C., aged twenty-nine, admitted to hospital February 8, 1883, fell on the ice and fractured his right femur at the upper third. Shortening one inch. Put up on a double inclined plane with coaptation splints and extension with a weight of twelve pounds.

February 24th. Double inclined plane removed, and Buck's extension substituted. Passive motion of knee.

March 2d. Plaster-of-Paris spica, extending to the knee, applied.

March 5th. On crutches. Passive motion of knee every day.

March 16th. Goes up and down stairs on crutches.

March 22d. Spica made into a splint by removing the body band.

March 29th. Discharged well. Shortening imperceptible. To wear the splint two weeks.

CASE III. W. A. J., aged thirty-seven, admitted to

hospital February 8, 1883. The left femur was broken at the lower third by a falling tree. Injured leg slightly longer than the other. Patient says the right leg was always shorter than the left. Put up in Buck's extension with a weight of twelve pounds.

February 24th. Passive motion of knee.

March 7th. Plaster-of-Paris spica, extending to the knee, applied.

March 8th. On crutches. Passive motion of knee every day.

March 22d. Spica removed and made into a splint.

March 28th. Discharged well. Shortening imperceptible. To wear the splint two weeks.

CHRONIC SUPPURATIVE ARTHRITIS OF KNEE. AMPUTATION.

CASE IV. T. C., aged twenty-one, admitted to hospital March 9, 1883, with a history of trouble in the knee, of two years' standing, following an injury. Three weeks ago a sinus opened on the inside of the knee, through which the probe shows the head of the tibia and condyle of the femur to be eroded. Has considerable pain.

March 17th. Resection of joint advised on consultation.

March 20th. Resection having been performed, the disease was found to penetrate so far into the shafts of both tibia and femur that a shortening of five inches would be required to reach healthy tissue. Amputation was therefore decided upon, and this was done in the lower third of the thigh, a long anterior skin flap and a posterior muscular flap being made. Lister dressing.

The patient's condition improved greatly after the operation, and his appetite, which before had been very poor, began to improve immediately. He had very little surgical fever, and the wound healed quite rapidly with the exception of a sinus where the drainage tube had been, in which considerable pus collected.

COMPOUND FRACTURE OF TIBIA AND FIBULA.

CASE V. M. S., aged twenty-six, admitted to hospital March 17, 1883. Twelve weeks ago a log of wood fell upon his right leg, fracturing the tibia and fibula and inflicting an open, contused wound over the seat of fracture. It was put up on a double inclined plane with insufficient padding, and has not been touched until now. The calf is flattened out of shape by constant pressure, and there is a bed sore on the heel. Extensive necrosis of tibia found on probing through two large ulcerated openings over the fracture. No union of fragments. General condition very poor; patient is weak, thin, and pale.

March 22d. The patient has been kept on his side with his leg on a pillow, and it has now recovered its natural shape, although quite swollen and oedematous. Shortening two inches. Fenestrated plaster-of-Paris splint applied, the leg being extended as much as possible.

March 23d. Very comfortable. Sitting up. General condition has improved very much.

March 31st. On crutches. Up and about all day.

April 7th. Leg examined under ether. There is quite firm union of the fragments. Sequestrum not sufficiently loose to be removed. Bed sore has entirely healed.

April 22d. As far as general condition goes he is well and strong, and has gained flesh rapidly. The

dead bone is not yet quite loose enough to be removed. He continues to wear the splint. Discharged at his own request.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

APRIL 16, 1883. DR. J. STEDMAN reported three cases of

POST-MORTEM DIAGNOSIS.

CASE I. Architect, age twenty-eight. Has never been very robust; while in college was thrown from a horse, but remounted and rode two miles without difficulty; had no unpleasant after effects. For the last year has had occasional severe headaches, and once called things by their wrong names.

March 3d he appeared well, worked during the day, and dined with a good appetite. At four o'clock the next morning had a severe attack of headache, for which he took thirty drops of laudanum; repeated in an hour. The headache increasing he was seen by the doctor, who gave four drachms of ether by inhalation, which quieted the patient, and gave natural sleep at eleven o'clock. When seen at half-past twelve he was found to be dead, but this had happened so quietly that those in the room did not know it.

The autopsy by Dr. Fitz showed cerebral substance anæmic and dry, lateral ventricles distended with a clear watery fluid, and one third larger than normal size. A gray gelatinous tumor the size of a filbert was found upon the velum interpositum in the median line behind the fifth ventricle in the region of the anterior commissure, on a level with the junction of the corpora striata and optic thalami. The tumor was easily removed from its surroundings, and on examination proved to be cystic, with gelatinous colloid contents.

Diagnosis. Colloid cyst, presumably of choroid plexus; ventricular dropsy.

In reply to Dr. Blake, DR. FITZ stated that there was nothing in the tumor to indicate its age, and that death took place probably from suffocation due to anæmia of the brain. The case is a rare one, although a similar case is reported in the early numbers of Virchow's *Archives*, where a soldier who was weak in mind and body was transferred to an invalid home; the symptoms increasing he was sent back to the hospital, and died. The autopsy showed a tumor of the same region with ventricular dropsy. In the case reported the absence of symptoms during life was probably due to the situation of the tumor.

CASE II. Woman, age about fifty years. Came from the Provinces to be under the care of a quack. He took a fee of \$200, and told her that she had a cancer which he could cure in four months.

Some months afterward, while visiting a friend, she was suddenly taken ill. The quack refused to see her unless she paid him a fee of \$300, but sent some medicine to be taken according to printed directions. When the patient was seen by Dr. Stedman she was moribund, and died within twenty-four hours.

The autopsy, by Dr. Ernst, showed left pleura adhesive throughout; heart soft and flabby; walls thinned; fatty infiltration of muscular tissue; in the left iliac

region extensive adhesions of the intestines to the pelvic wall. Microscopic examination of kidneys showed almost complete fatty degeneration of the convoluted tubules; both kidneys were enlarged, and had the cortical portion thickened and swollen.

Diagnosis. Chronic parenchymatous nephritis, and cardiac exhaustion.

CASE III. Woman, eighty-four years of age. Has been a widow sixteen years. Was always well until about three months after going to Europe, when she was taken sick, and was confined to her bed for a week. After this a painless diarrhoea set in, which continued some seven months, when, after a very painful journey from Florence to Bologna, she had a severe chill, followed by the breaking of an abscess in the vagina and the discharge of very offensive pus. She remained under the care of Dr. Benetti for five months, who writes that the patient had a pelvic cellulitis of the left iliac fossa which discharged large amounts of pus into the vagina; this gradually disappeared and the opening cicatrized. The patient was then attacked by intermittent fever, followed by a return of the diarrhoea, from which she made a slow convalescence. Some fourteen years later she had a return of intestinal disturbance and some bronchitis, of which she died.

The autopsy by Dr. Cutler showed old peritoneal thickening of the mesocolon, of the descending colon, and sigmoid flexure. Cicatricial thickening of the mesentery here and there. Old adhesions at the entrance of the ileum into the cæcum. Liver atrophied. The kidneys presented the characteristics of the senile granular change. There were old adhesions in Douglas's space between the fundus of the uterus and peritonæum. The left Fallopian tube was occluded near its extremity, and attached to the left ovary, which showed a cystic degeneration. In the posterior wall of the uterus was a fibro-myxoma about the size of an orange. Just below and to the left of the external os was a cicatrix in the vaginal wall leading up to the connective tissue of the left broad ligament, and to the subperitoneal tissue of the side of the pelvis. The rectum was contracted by cicatricial bands in the peritonæum. The lungs were emphysematous along their upper portions; in the left an atelectasis of the lower portion of the lower lobe, and a spot of recent pleurisy in posterior portion of upper lobe. The bronchi to their smallest divisions were injected. The mucous membrane thickened and covered with muco-purulent secretion.

In reply to Dr. Blake, DR. CUTLER said he had never seen a case where there was such an amount of cicatricial tissue in the abdomen. The rectum was so bound down that a finger could hardly be passed into it.

DR. STEDMAN said that for two years before death the patient required artificial aid for an evacuation of the bowels, and at one time there was an appearance of a tumor in the left iliac fossa, caused by some coils of intestine being caught by one of the cicatricial bands.

— A bust of Professor Erichsen and a sum of money were presented to him a few weeks ago by a number of his pupils and admirers. The bust is deposited in the University College. Mr. Erichsen will use the money to found a prize for skill in operative surgery.

Recent Literature.

Electricity in Medicine and Surgery. By GEORGE C. PITZER, M. D., Professor of the Theory and Practice of Medicine in the American Medical College, St. Louis, Clinical Lecturer at the City Hospital, St. Louis, Editor of the American Medical Journal, etc. Second edition. St. Louis, Mo. 1883.

The first edition seems to have been issued some time in January, 1883. The preface to this edition is dated May 1, 1883. It seems from the preface that the first edition was exhausted in a few weeks. Either the first edition was very small or there was a woful dearth of reasonably good books on electricity in that section of the country.

It has seldom been our fortune to notice a book so lacking in system or logical order, so worthless in regard to the object sought.

The first part, on machines, seems to be fairly well written, though we have not thought it worth while to read it. The portion devoted to electro-therapeutics is rather a hash. There is no attempt at systematic treatment. On pages 32 to 35 an attempt is made to explain the value of electricity in diagnosis, but electro-diagnosis is not mentioned otherwise until page 81; between these he briefly considers painful affections, as neuralgia, quoting four pages, central galvanization, electrolysis, the removal of hairs, quoting nearly twelve pages from Dr. George H. Fox, then various miscellaneous diseases, as of the skin, amaurosis, amenorrhœa, lead-poisoning, lumbago, rheumatism, local atrophy, etc. He then has a chapter on "the wrong current," quoting four pages. Liberal quotations are made in regard to detecting malingerers, detecting death, the use of electricity in asphyxia, and about static electricity. We have given above nearly the whole table of contents, to show how little order and how little value there is in the book.

As an example of the style of the original portion we should like to quote a whole page, but content ourselves with part of one page, omitting a few sentences. Speaking of facial paralysis he says, "This is not our first case, no, indeed, and from the experience and observation we have had we have learned to make successful and satisfactory examinations in this class of diseases. Well, how are we to know whether this is a case of central or peripheral disease? . . . But one of the most important and certain tests for central or peripheral paralysis is electricity, and I resorted to it. I have Kidder's electro-magnetic machine, and I tip the cup holding the fluid, attach the cords, upon the distal ends of which I attach sponge electrodes wet with warm water. I place the electrode. . . . I commence with a mild current; . . . I increase the strength. . . . I am pretty well satisfied. But I have a galvanic battery, . . . and I change the cords. . . . I now place the electrode, . . . and as I move it about over the cheek I observe a drawing of the face, . . . and as I move the sponge toward the temple the eye closes. All this convinces me that we have a case of simple peripheral paralysis." Why the change from first person singular to plural? Fourteen I's in one page is a fair allowance.

There are some useful hints in the book, but so much is omitted which ought to be included in even an elementary work of this nature that the book is of very little value.

Medical and Surgical Journal.

THURSDAY, AUGUST 9, 1883.

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EPIDEMIC CHOLERA.

ALTHOUGH cholera has been a common disease in India almost from time immemorial it is only since the great development of commerce and intercommunication between nations of the present century that it has prevailed outside of Asia. A little over sixty years ago the first European epidemic occurred, not extending farther west, however, than the Russian frontier. Since then the disease wholly disappeared from Europe less than one year in three, and it has been prevalent in a pestilential degree once in each decade, the second, third, fourth, fifth, and sixth epidemics extending to the westernmost parts of Europe, and reaching this country respectively in the years 1832, 1848-49, 1854, 1865-66, 1873, for the most part through the ports of Quebec, New York, and New Orleans. The last epidemic in this country was the most widespread of all, partly because the country had become so much larger. In 1865-66 the disease was shown to be, to a very great extent, controllable by sanitary inspection and control even in places where local conditions were favorable to its spread. In 1873 it was fatal in two hundred cities and towns of thirteen States, for the most part in or starting from the Mississippi valley.

So far as we can judge, therefore, the time is near at hand when another cholera epidemic may be reasonably expected, and there can be no doubt that it has already appeared in Egypt. No other disease than Asiatic cholera, with similar symptoms, would cause over three hundred deaths a day in a city of the size of Cairo.

The fact is established beyond a doubt that the "germ" of cholera is transportable in merchandise, in clothing, in bedding, and in the person of unclean people, often in ways the most difficult to trace. The source and method of its last introduction into the United States, for instance, have never been satisfactorily explained. It is equally true also that cholera never spreads to a dangerous extent when once imported except in nasty places. It does not prevail in all nasty places, nor in nasty places in proportion to their nastiness. In fact our last epidemic was very fatal in Nashville, where yellow fever, five years later, fell very lightly, while it was mild in Memphis and New Orleans, which were so scourged in our great yellow fever epidemic of 1878. Some of us have thought that many of our cities have tried to see how

far they could avoid the expense of cleanliness and yet keep clear of pestilences. Perhaps some of our neighbors think that a city which drinks the drainage of Woburn and Winchester and the sewage of Natick, and in whose chief source of water supply a legislative act allows promiscuous bathing, is trying to see how nasty it can be and escape disease.

The questions which interest us most in the prevention of cholera at this time are (1) whether cities can be cleaned to the extent of not fearing cholera if it is imported, and (2) whether the importation of the disease can be prevented.

To the first question the most striking affirmative answer is in Hamburg, which was very extensively destroyed by fire after the first cholera epidemic which reached western Europe, and was so cleaned and provided with good sewerage (the first city to be well sewered), and good and abundant water supply, that the succeeding cholera epidemics have been of little account there. After the second visitation of cholera in London, similar cleaning up, especially of the water supplies, was done with similar results. Such conspicuous examples were at once published abroad, so that the number of cities that have "cleaned out" cholera is now quite large. Many of our cities are still up to the standard of cholera-filth; how many are beyond it we do not know. It is certain that, in time of a threatened epidemic, it is seldom that there is time to complete sewerage works or radically improve water supplies.

As to preventing the importation of cholera, there is much to be said on both sides. It probably is not possible to be always successful in so doing, but the simple facts that in nine different years cholera has got so far as the New York quarantine station without being allowed to spread farther, and that in only seven years it has become widely prevalent, make it worth while to spare no effort to prevent a single case or a single infected article of clothing or merchandize, especially rags, which often go by most circuitous routes from one port to another, from being landed, without every precaution possible being taken to thoroughly isolate the sick person and to effectually disinfect the ship by destroying or fumigating, as the case may require, all infected or suspicious matter.

It is a matter of congratulation that our city Board of Health is just about to put up a building large enough to store and disinfect any dangerous matter that may come to our port. They have ample power under our laws, and may be safely trusted to exercise it wisely.

VITAL STATISTICS OF PROVIDENCE.

THE twenty-eighth Annual Report of the Births, Marriages, and Deaths in the City of Providence, has reached us, covering the year 1882. This report, made by the Superintendent of Health and City Registrar, Dr. Edwin M. Snow, always shows careful and laborious work, and contains much valuable statistical information. This city has now reached a population of nearly 117,000, so that it forms a tolerably good

representative of New England urban vital conditions. For this reason its statistics have a much more than local value and significance.

For the year 1882, as well as for the average of the last twenty-eight years, the number of births has been greater in December than in any other month. In interesting connection with this we may place the fact that last year, as for the previous years, the per cent. of marriages in the first quarter of the year has been lower than that in any other quarter except the third, while the fourth quarter of the year is always most prolific in marriages.

The male births show, as heretofore, a constant preponderance over the female. The average for the last twenty-nine years has been about 51.43 males and 48.57 females in 100 children.

Of the 2788 children born during the year about twenty-four per cent. were the first born of their mothers, and the 2759 mothers parturient during the year have had in all 9974 children, giving an average to each mother of 3.62 children.

The oldest mother in 1882 was 50 years of age and bore her third child in 1882. The number of mothers of 40 years and over, bearing children in 1882, was 128; the number of children borne by them during the year, 128; the total number of children borne by them, 927; an average of 7.24 children to each mother.

The number of plurality births during the year was 29, in all cases twins. In 11 cases both children were males; in 10, both were females; and in 8 cases there was one child of each sex; in all, 30 male and 28 female children. The proportion of cases of plurality births to the total labors was for the year 1 in 95. For the last twenty-eight years, 1 in 85.

We fail to find in this report any figures showing the number of divorces, a subject which we have found of interest in the previous annual reports.

The total deaths for the year were 2242, the rate being 19.60 per 1000, which is about the average.

The average age of decedents of American parentage, was 33.72 years, or 0.44 year less than in 1881; of decedents of foreign parentage, the average age in 1882, was 30.34 years, which was 2.26 years more than in 1881, and was the highest average age ever recorded for decedents of foreign parentage.

It is noteworthy that with the exception of two months in 1882 every month for twenty-eight years has shown a greater average longevity of American decedents than of those of the foreign class, the average difference between the two classes for that period having been 8.93 years.

An interesting table is given showing in detail the causes of death, and their prevalence in each month of the year. The predominance of diarrhoeal diseases in the summer months is, of course, marked, as is also that of diseases of the respiratory organs in the first and last quarters of the year. Among the other causes of death we notice childbirth, 27 cases (of which puerperal fever constituted 18). These 27 deaths were 1.21 of all deaths from known causes, and 0.98 per cent. of the mothers having children during the year.

Consumption caused 15.72 per cent. of the total deaths, and the ratio of deaths from this disease to the whole population was 3.07 in a thousand. The most important disease of the year, from a hygienic point of view, was typhoid fever, which caused 140 deaths, against a greatest previous maximum of 82 in any one year, the average of twenty-eight years being only 42. The disease became fairly epidemic in October and November. On this point the report says:—

"There were no special indications of the fever in 1882 up to the last of October. There were only 42 deaths in all the year to the 1st of November; there were 9 in September, and only 8 in October. In fact, at the middle of the month of October there seemed to be less typhoid fever in the city than was usual at that season. Only 13 cases were then or afterwards reported as having commenced from the 1st to the 20th of October inclusive.

"After the 20th of October the number of cases increased rapidly, and the disease speedily became epidemic. During the ten days, including the last five days of October and the first five days of November, 212 cases were reported, the greatest daily number being 45, on the first day of November. From that date the disease declined slowly in November, much more rapidly in December, and almost entirely disappeared in January, 1883.

"It seems, then, that the epidemic reached its height in ten or twelve days after its beginning, and that after a certain date (October 20th), at which there was scarcely any typhoid fever in the city, within fifteen days 248 cases were reported. These cases were in almost every portion of the city, and without any apparent tendency to concentration in any particular locality. This fact seems important with reference to the popular theory that there must be a direct connection of every case of typhoid fever with some preceding case.

"Though the disease had almost disappeared in January and February, 1883, another epidemic of less severity and extent began about the 16th of March. There were 61 cases reported in the twelve days from March 16th to March 27th inclusive. After the latter date the disease rapidly declined."

The registrar promises fuller details of the history, and more especially of the causes of the disease, to be given hereafter in a special report upon the epidemic.

It is to be wished in the interest of social science that other municipalities would publish as elaborate and reliable reports of their vital statistics as does the city of Providence.

MEDICAL NOTES.

— According to a telegraphic dispatch to the *Boston Journal*, a pastoral of Mgr. Fabre on the Laval University and Victoria College question was read in all the Catholic churches in Montreal on Sunday last. The pastoral commands the Sister Superior of the Hotel Dieu not to admit the Faculty and the students of Victoria College within the precincts of the hospital hereafter, and to allow the Medical Faculty and stu-

dents of Laval University to take their places. It excommunicates the Faculty of Victoria College, and urges the priests to deter the youth of their flocks from patronizing that Protestant seat of learning under pain of excommunication should they transgress the Pope's mandate on that subject.

— A member of the class of 1883 of the College of Physicians and Surgeons of Baltimore, who was rejected in his candidacy for a diploma, petitioned the court to issue a writ of mandamus upon the Faculty that they shall issue his diploma to him, claiming that his rejection had damaged his character to the amount of \$2000. After argument before the court the judge decided in favor of the Faculty. An appeal has been taken.

— Dr. Louvain, of Carlsbad, has met with several cases in which difficulty of breathing was due to the administration of moderate doses of salicylic acid; the breathing was labored and rapid. — *Berl. Klinische Wochenschr.*, 1883, No. 16.

— In the shipwreck of the Portuguese barque Pimpao, on the coast of Pico, June 28th, among the lost was Dr. Edward Mead, of Roxbury, who was taking a voyage to the Azores for recreation and health. Dr. Mead was born in England in 1819, coming to America in 1832. He early made medicine his study, graduating from the Medical College of Ohio in 1841. He made insanity his specialty, and was a very devoted laborer in his profession. From 1842 to 1852 he successfully conducted a private asylum at Chicago, removing in the latter year to Cincinnati, where he resided from 1852 to 1869. At Cincinnati he filled several public positions, and during the war was an active member of the Sanitary Commission. Since 1870 he has been in Boston, where he established a private institution in 1872. He held at one time a professorship in the Medical Department of Illinois College, and later a similar position in the Cincinnati College of Medicine and Surgery. At the time of his death he was a member of the Massachusetts State Medical Society, and was one of the councillors of the Norfolk District Medical Society. Dr. Mead leaves a widow and one son in Boston, and two daughters and a son at the West.

— M. Pasteur having offered to organize a mission for investigating the cholera in Egypt, the Hygiene Commission has indorsed the scheme. The mission will consist of M. Roux and M. Thuillier, of M. Pasteur's laboratory; M. Strauss, of the Faculty of Medicine; and M. Nolaco. M. Pasteur has written to Lord Granville to solicit the grant of facilities to the mission in Egypt.

— The *Lancet* says in answer to a correspondent: It is probable that the best American degrees will be registrable under the new act. Two conditions will be indispensable—the first, that the degree shall qualify for practice in the country in which it is granted; the second, that the Medical Council shall be satisfied that it represents an amount of education equal to that required for passing the examination of the new Board to be established.

— A writer in the *Maryland Medical Journal* describes the Juries of Matrons formerly employed in that

State on writs *de ventre inspiciendo*, in cases of suspected pregnancy. Cases are given of indictments for child murder, adultery, etc., as well as where women were under capital sentence, where these juries of "twelve respectable women, assisted by the sheriff," examined the prisoner and reported on the existence or non-existence of pregnancy. The custom seems to have come from the English common law, and though not used since 1769 has never been formally abrogated in the courts of Maryland.

— The *Sanitary Engineer* tells a recent story from Texas, which illustrates in a grotesquely horrible way the indifference of people to the condition of their drinking-water. A public well in Brownsville was cleaned out a short time ago, and in it were found the remains of a prisoner who had disappeared, it is said, several years since. Then the people remembered that, to be sure, the water did at one time taste bad, and hair and flesh had been found in it. But as it was supposed these came only from drowned rats or cats, they went on drinking the water unconcernedly. The question of dirt was of no importance; distilled dead animals they endured with equanimity—only when it proved to be dead prisoner did they attach any importance to the bad taste and smell.

— A coroner's jury in a Pennsylvania town has found a physician guilty of criminal ignorance in prescribing a drug (acetate of potassium) in a case where death resulted by reason of the drug actually dispensed having been cyanide of potassium, the bottle actually containing the latter substance having been wrongly labeled. A similar accident had occurred once before, but without fatal result, the patient having refused to take more than one dose. On receiving another prescription soon after for the same drug the clerk (who was merely a salesman in an ordinary "country store," and who knew nothing of pharmacy) told the physician how the medicine had affected the former patient. The doctor asked to see the jar containing the acetate, and after examining it he said: "Clark may have had a fit, but this medicine never caused it; it is all right; weigh out an ounce for Mr. Swift." He then gave Mr. Swift the package, and gave him verbal directions how he should use it. The first dose proved fatal. It is stated that after the death of the patient Dr. Gray examined the medicine once more in the stock bottle at the grocery, tasted it, rubbed a little between his thumb and finger, said it felt "greasy," but still called it acetate of potassium, and said he thought the medicine had nothing to do with the patient's death; thought he died from congestion of the brain. The evidence of the autopsy, however, was otherwise. It is to be hoped that the jury which has justly held the physician to so strict a responsibility for not recognizing the physical appearances of a wrongly labeled drug after his attention had been called to the likelihood of a mistake as to its nature, will be equally severe in punishing the carelessness which permits a seller of country "notions" to dispense a deadly drug of whose nature he is totally ignorant.

— *Science* reproduces from Pflüger's *Archiv* the

following on the heart as a suction-pump: It has long been discussed whether the ventricle of the heart is not only a force-pump in systole, but also a suction-pump in diastole, actively dilating, and drawing blood into it from the veins. That within the closed thorax there is, due to the negative pressure prevailing in that cavity, an active diastole cannot be doubted; but is there such a diastole when the chest is opened, or does then the blood returned to the heart from the veins merely push apart the flaccid walls of the heart-chambers?

Goltz and Gaule have, among others, maintained the doctrine of such active diastole. Even with an open thorax, they found a negative pressure occurred in the heart during some part of a cardiac period; and, though their method of work did not enable them to determine at what moment in the heart's cycle this negative pressure occurred, they assumed that it was during the diastole. Moens, however, in a subsequent noteworthy paper, brought forward experimental and other proofs that the negative pressure in the left ventricle existed at the end of the systole, and not in the diastole at all; if so, the heart was not a suction-pump. Jager now returns to the question; and taking as starting-points the assumptions, that, if negative ventricular pressure occurred at the close of the systole it must show itself in the aorta, but if during diastole in the auricles, he concludes that it is diastolic; since his experiments show that at no time is there a negative pressure in the aorta, while there may be such in either auricle. Accordingly, he maintains that the heart is a suction-pump. We may remark, however, that the correctness of his primary assumption is by no means certain: hence his whole argument falls to pieces. There is, on the contrary, strong reason to believe that the ventricular contraction lasts after closure of the semi-lunar valves, and that it is just at this very end of the systole that the negative intra-cardiac pressure occurs.

— In Bellevue Hospital yard is a photograph gallery, where the hospital photographer takes photographs of all the unknown dead who are brought to the morgue. He places the coffin containing the dead body in an upright position in an angle of the morgue building, and makes a photograph of the face.

— The autopsies of some of the criminals executed in the early part of this century are published in an English contemporary, showing that instantaneous death by dislocation of the vertebræ was then rarely the case. That desirable result is claimed to have occurred in every one but one of "Marwood's" many executions, "Marwood's Drops" being now in jail slang the reliable sedative for all fleshly ills. But before this science had been so perfected, the careful autopsies showed some unpleasant facts. For instance, John Bellingham was executed in 1812. There was no dislocation of the vertebræ, according to the record, "nor did the trachea show any sign of compression or hurt. The right Auricle of the Heart moved at irregular Intervals, without the Application of any Stimulus, during the Period of nearly four Hours from the Time of Execution, and for about an Hour longer upon

being Touched with a Scalpel. This Motion was not strictly a contractile Action, diminishing in any sensible Degree the Cavity of the Auricle, it was undulatory and weak, sometimes beginning at the right extremity of the Auricle and moving to the left; at other times commencing and proceeding in the contrary Direction. Not the least Motion was observable in the left Auricle, or in either of the Ventracles." In the case of John Bruce, executed at Execution Dock at eight o'clock, and received so late as half-past twelve, there were the same weak waving motions for a period of *five hours after execution*.

— "An octogenarian," writing to an English contemporary, makes certain very suggestive reflections on the influence of vaccination on the people whom it protects. After expressing a wish that those who question the utility of vaccination could, without losing the advantages of youth, receive the memories of his own earlier days, he continues: "I may safely say that for every person I now meet with seamed or pitted face I then met a hundred, many grievously disfigured, and not a few blind. This was bad enough, though even then, thanks to small-pox inoculation, and more lately to the vaccine protection, sufferers were at least in a very decided minority; but I have heard my mother say that in her early days marks of small-pox were so prevalent that it was common to distinguish one free from them as a smooth-faced person."

NEW YORK.

— Another of the Alexandre line of steamers (the City of Merida) on which yellow fever broke out during the homeward voyage arrived in port on the 1st of August. She left Vera Cruz on the 19th of July, and before reaching Havana, on the 25th, eight of her crew were attacked with it. One of the engineers of the ship died from the fever, and the other serious cases were sent to the hospital in Havana. During the voyage from Havana to New York, however, there was no sickness on board.

— The first case of yellow fever to reach the port during the present summer arrived on the 31st of July on the bark Havana, from Havana. One of the crew was found to be suffering from the disease, and he was sent to the West Bank Hospital, while the vessel was put into close quarantine at the Hospital Islands.

— Notwithstanding the high mortality during the early part of the month, the number of deaths in the city during July was 374 less than in July of last year. The total number of deaths from January 1st to August 1, 1883, has been 3096 less than during the corresponding period of 1882.

— The steamship Glenarvon arrived from Yokohama, by way of the Suez Canal, on the 30th of July, and although she had stopped at no cholera port, and her captain reported that there had been no sickness on board during the voyage, she was ordered to lower quarantine, where she was subjected to a very thorough inspection. This having proved satisfactory, she was allowed to come up to the city. Health Officer Smith has made a regulation to the effect that the

shippers of rags from European ports shall make affidavits before the American consuls that the rags are "domestic," and not reshipments. If they are of the latter description it must be stated from what port they originally came. By following this regulation the shippers of cargoes of rags can prevent their needless detention at quarantine.

Miscellany.

THE MARRIAGE OF NEUROTIC PATIENTS.

In the *Journal of Mental Science*, April, 1883, is a paper by Dr. G. H. Savage on the vexed question of the propriety of marriage in individuals who suffer from insanity, epilepsy, or grave hysteria. After stating the opposite opinions that have been held on this point the writer says, "I am inclined to think that if it were possible for us to select those who are to be married, and if we selected only those who are nervously stable for the parents of the next generation, the children might suffer from a want of adaptability. They might, in fact, develop from nervous stability into nervous rigidity." In other words, it is possible for people to be too robust in their muscular and circulatory systems in proportion to their nervous development. In fact the most robust offspring are often seen from parents of which one is of a highly nervous temperament.

Regarding the effect of marriage upon the course of major hysteria, Dr. Savage says: "It would be harmful, in my experience, if every young hysteric were then and there married. The relief, if any, would be temporary, and the result to the developing organism would be disastrous. I do not myself believe that hysteria is generally benefited by marriage. I admit I have seen one case in which anorexia nervosa and extreme depression in a young, single girl passed off after marriage and the birth of children. On the other hand I have seen several cases in which the hysterical girl has become the insane mother, and the hoped-for cure by marriage has proved a delusive dream."

Next, as regards epilepsy, Dr. Savage writes: "I should dread the effects of marriage upon an epileptic almost more than those who had been insane. The comparative rarity with which epileptics get well and the mysterious causation of the whole epileptic condition make it a dangerous experiment to recommend marriage for the relief of these unknown conditions."

Individuals suffering from a complication of hysteria with insanity are believed to subject their children to a greater risk than those who have hysteria combined with mental disorder. Those who have been simply insane are not necessarily to be dissuaded from marrying. If the other party is of good health and free from nervous disposition a person who has had an attack of insanity may be allowed to marry provided he has not a markedly nervous inheritance.

"Another point is when a patient may be married, that is, how soon after an attack of insanity. Most of us have seen cases in which the insane inheritance has been transmitted directly, and, if I may say so, immediately. I have seen three or four cases in which children have been begotten by insane parents who were suffering from acute insanity at the time of their begetting. Such persons are almost sure to be weak minded, idiotic, or imbecile from birth. On the other

hand the greater the distance there is between the attack and the begetting of the child the less danger is there to the offspring. I am in the habit of saying that a general paralytic father rarely begets an insane child unless that child is begotten during the active stage of the disease. . . . A parent who has been insane may beget an insane child soon after recovery, before the attack, or during the attack of insanity, but may beget perfectly sane children in the interval."

In connection with the foregoing it is of interest to cite some rather surprising facts given by Dr. Bannister in the *New York Journal of Nervous and Mental Disease* (January, 1883), on the relative frequency of intermarriages of the insane. Of 104 cases of hereditary insanity recorded in the Illinois State Asylum no less than four had both father and mother insane; three others had it by direct paternal and collateral maternal heredity; two had direct maternal and collateral paternal heredity; and in one case there was collateral heredity of insanity on both sides. Thus nearly ten per cent. of those with insane heredity had it on both sides, and hence were favored with a double opportunity to inherit mental disease. If to these be added the instances where, with insanity in one parent, there is reported either epilepsy, hysteria, drunkenness, "brain disease," "nervousness," etc., of the other, the ratio of double inheritance rises to over twenty per cent. Three instances occurred in one asylum of husband and wife being patients together.

Perhaps, as has been suggested, this intermarrying of insane persons is due in part to the fact that cases of mental unsoundness become generally known to the public, and that as the sane hesitate to ally themselves with those who have been insane, so if the latter wish to marry they cannot easily obtain mates except among those who are similarly marked. Certainly if this be so physicians cannot be too sedulous in correcting the impression that insane people are only fit to marry each other.

PROLONGED SUSPENSION OF VITALITY DUE TO ATROPIA INJECTED HYPODERMICALLY.

DR. ALEXANDER, in the *Medical Times and Gazette* (May, 1883), reports a case of a woman, aged thirty-seven, who had been operated on for an enlargement of the left ovary. At noon, four days after the operation, she became very excited, and disturbed the dressings of the wound, so twelve minims of the hospital solution of morphia and atropine were injected. This represented three fifths grain of morphia and one fortieth grain of atropine. At one o'clock she became livid, and a nurse injected another five minims of solution before the house-surgeon arrived. When he came he injected ammonia, gave brandy enemata, used artificial respiration, and applied electricity without effect. At four P. M. the nurse was laying the woman out, but Dr. Alexander came in and determined to proceed with artificial respiration, galvanism, frictions. Up to 5.30 P. M. only a spasmodic breath every quarter of an hour and a feeble beat of the pulse every now and then could be detected. At seven P. M. a nurse poured some coffee into the patient's mouth, and she suddenly fell back as if dead, but by turning her over on her side she was made to vomit. By nine o'clock the respirations were beginning to be more frequent and the pulse stronger; she soon became conscious after this, and recovered perfectly.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 21, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	873	516	48.91	5.36	39.78	1.94	1.14
Philadelphia.....	846,984	479	230	26.21	11.23	20.58	—	1.87
Brooklyn.....	566,689	397	248	49.45	7.28	43.93	2.11	2.01
Chicago.....	503,304	322	224	44.81	6.49	37.70	1.54	3.09
Boston.....	362,535	201	111	37.24	9.80	31.36	1.96	..98
St. Louis.....	350,522	184	97	39.64	2.72	24.44	5.43	2.17
Baltimore.....	332,190	222	130	39.60	12.60	30.15	3.15	2.25
Cincinnati.....	255,708	120	51	24.99	10.93	18.33	—	1.66
New Orleans.....	216,140	140	39	32.13	12.14	3.57	1.43	—
District of Columbia.....	177,638	—	—	—	—	—	—	—
Pittsburg.....(1883)	175,000	88	51	48.62	4.54	26.94	1.14	—
Buffalo.....	155,137	54	27	29.60	12.95	22.20	—	1.85
Milwaukee.....	115,578	54	29	29.60	11.10	16.65	7.40	—
Providence.....(1883)	116,755	59	26	28.73	11.83	18.59	—	—
New Haven.....(1883)	73,000	48	29	45.76	2.08	33.28	2.08	2.08
Charleston.....	49,999	47	28	27.69	4.26	21.28	—	—
Nashville.....	43,461	39	21	37.93	10.34	27.58	3.45	—
Lowell.....	59,485	33	17	18.18	9.09	18.18	—	—
Worcester.....	58,295	26	24	61.60	7.70	53.90	—	—
Cambridge.....	52,740	22	12	50.00	9.09	36.36	13.64	—
Fall River.....	49,006	41	24	51.24	4.88	48.80	—	—
Lawrence.....	39,178	16	11	43.75	—	43.75	—	—
Lynn.....	38,284	13	7	7.69	15.38	7.69	—	—
Springfield.....	33,340	—	—	—	—	—	—	—
Salem.....	27,598	11	2	9.09	27.27	9.09	—	—
New Bedford.....	26,875	16	7	43.75	12.50	43.75	—	—
Somerville.....	24,985	8	6	65.00	—	62.50	12.50	—
Holyoke.....	21,851	14	10	50.00	—	50.00	—	—
Chelsea.....	21,785	16	6	18.75	18.75	6.25	—	—
Taunton.....	21,213	8	0	—	12.50	—	—	—
Gloucester.....	19,329	5	2	—	—	—	—	—
Haverhill.....	18,475	8	2	25.00	25.00	25.00	—	—
Newton.....	16,995	2	1	50.00	—	50.00	—	—
Brockton.....	13,608	6	3	66.66	—	33.33	16.66	—
Newburyport.....	13,537	5	2	40.00	40.00	20.00	20.00	—
Fitchburg.....	12,405	3	2	—	—	—	—	—
Malden.....	12,017	5	3	20.00	20.00	20.00	—	—
Eighteen Massachusetts towns.....	133,315	48	20	45.76	12.48	37.44	4.16	—

Deaths reported 3623 (no report from District of Columbia) : under five years of age, 2018 : principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 1454, diarrhoeal diseases 1142, consumption 358, lung diseases 128, diphtheria and croup 67, scarlet fever 52, typhoid fever 44, malarial fevers 39, measles 35, small-pox 27, whooping-cough 19, cerebro-spinal meningitis 16, puerperal fever seven, erysipelas six. From *typhoid fever*, Philadelphia 10, New York eight, Providence five, Brooklyn and Cincinnati three each, Boston, St. Louis, Baltimore, and Pittsburg two each, Chicago, New Orleans, Buffalo, New Haven, Charleston, Nashville, and Chelsea one each. From *malarial fevers*, New York and New Orleans 12 each, St. Louis four, Brooklyn, New Haven, and Charleston two each, Philadelphia, Chicago, Baltimore, Providence, and Nashville one each. From *measles*, New York 16, Baltimore five, Philadelphia three, Brooklyn, Chicago, St. Louis, Cincinnati, New Orleans, Pittsburg, Buffalo, Worcester, Chelsea, Newburyport, and Northampton one each. From *puerperal fever*, Chicago and St. Louis two each, Cincinnati, New Orleans, and Fall River one each. From *small-pox*, New Orleans 23, St. Louis three, Philadelphia one. From *whooping-cough*, New York nine, Philadelphia three, Brooklyn two, Chicago, St. Louis, Buffalo, Milwaukee, and New Haven one each. From *cerebro-spinal meningitis*, New York six, Chicago and Milwaukee two each, St. Louis, Baltimore, Pittsburg, Worcester, Brockton, and Peabody one each. From *erysipelas*, New York and Boston two each, Philadelphia and Cincinnati one each.

Three cases of small-pox were reported in St. Louis, Buffalo two; measles 23, scarlet fever 19, typhoid fever 12, and diphtheria 11 in Boston; scarlet fever 20, and diphtheria 10 in Milwaukee.

In 37 cities and towns of Massachusetts, with an estimated population of 1,129,159 (estimated population of the State

1,922,530), the total death-rate for the week was 22.22 against 27.01 and 20.04, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending July 7th, the death-rate was 19.3. Deaths reported 3185 : acute diseases of the respiratory organs (London) 179, diarrhoeal diseases 249, measles 116, scarlet fever 71, whooping-cough 62, fever 39, diphtheria 19, small-pox (Birmingham three, London and Hull one each) five. The death-rates ranged from 10.8 in Brighton to 23.2 in Liverpool; Bristol 14; Leicester 15.3; Sunderland 16.4; Nottingham 17.3; Birkenhead 17.6; Manchester 19.1; Sheffield 19.4; Birmingham 19.5; London 20.1; Leeds 22.2. In Edinburgh 16.1; Glasgow 28.1; Dublin —.

For the week ending June 30th, in 169 German cities and towns, with an estimated population of 8,580,059, the death-rate was 28.9. Deaths reported 4764; under five years of age, 2619; consumption 585, lung diseases 432, diarrhoeal diseases 386, diphtheria and croup 137, measles and röteln 125, scarlet fever 82, typhoid fever 67, whooping-cough 43, puerperal fever 18, small-pox (Heilbronn eight, Breslau and Bremen two each) 12, typhus fever (Thorn one) one. The death-rates ranged from 16.4 in Mannheim to 44 in Berlin; Königsberg 29.7; Breslau 31.9; Munich 36.2; Dresden 26.7; Leipzig 23; Hamburg 26.5; Cologne 33.9; Frankfurt a. M. 28.4; Strasburg 21.5.

For the week ending July 7th, in the Swiss towns, there were 28 deaths from consumption, diarrhoeal diseases 21, lung diseases 20, diphtheria and croup five, measles four, whooping-cough two, typhoid fever two, scarlet fever one, puerperal fever one. The death-rates were at Geneva 18.4, Zurich 14, Basle 23.2, Berne 23.7.

The meteorological record for the week ending July 21st in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps : —

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
July, 1883.		Daily Mean.																	
Sun., 15	29.863	65	72	61	93	93	90	92	E	E	S	3	13	6	G	G	R	—	—
Mon., 16	29.892	71	78	62	84	76	100	87	NW	E	SE	5	12	3	F	F	G	—	—
Tues., 17	29.973	73	85	62	100	55	93	83	S	SE	S	2	11	7	O	C	F	—	—
Wed., 18	30.003	74	85	65	76	40	73	63	NW	W	NW	6	12	7	C	C	F	—	—
Thurs., 19	30.037	65	77	58	73	63	73	70	NW	E	NW	8	6	12	F	F	C	—	—
Fri., 20	30.114	68	78	57	68	37	73	59	NW	NW	W	12	11	6	C	F	C	—	—
Sat., 21	30.179	72	85	58	63	36	70	56	NW	N	SW	6	8	8	C	C	C	—	—
Means, the week.	30.052	69.9	85	57	56.5		73.1											6.20	.15

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 28, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Con-sumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	776	418	44.20	5.72	31.98	2.01	3.58
Philadelphia.....	846,984	441	235	34.80	2.49	24.41	2.71	4.29
Brooklyn.....	566,689	—	—	—	—	—	—	—
Chicago.....	503,304	364	258	47.85	3.03	44.16	1.92	2.48
Boston.....	362,535	253	133	48.59	12.64	42.66	1.19	2.37
St. Louis.....	350,522	184	103	37.80	7.02	24.84	2.16	4.32
Baltimore.....	332,190	212 ¹	132	40.51	7.06	28.83	.47	5.65
Cincinnati.....	255,708	126	59	25.28	11.06	19.75	3.16	.79
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	—	—	—	—	—	—	—
Pittsburg.....(1883)	175,000	96	55	33.28	7.28	30.16	1.04	—
Buffalo.....?	155,137	102	64	47.04	12.74	43.12	1.96	.98
Milwaukee.....	115,578	46	26	30.38	4.34	19.53	—	8.68
Providence.....(1883)	116,755	54	30	46.25	11.70	29.70	1.85	1.85
New Haven.....(1883)	73,000	51	31	43.12	3.92	37.24	—	1.96
Charleston.....	49,999	45	24	39.96	17.76	—	6.66	—
Nashville.....	43,461	24	11	29.12	8.32	16.64	—	—
Lowell.....	59,485	33	16	24.24	—	15.15	9.09	—
Worcester.....	58,295	38	25	42.08	7.89	39.45	—	—
Cambridge.....	52,740	28	17	60.69	10.71	46.41	—	14.28
Fall River.....	49,006	34	25	64.68	8.82	58.80	2.94	—
Lawrence.....	39,178	22	11	45.45	18.18	40.91	—	—
Lynn.....	38,284	22	13	40.91	9.09	36.36	4.54	—
Springfield.....	33,340	14	7	42.84	7.14	35.70	—	—
Salem.....	27,598	12	8	41.65	8.33	41.65	—	—
New Bedford.....	26,875	21	13	33.33	4.76	33.33	—	—
Somerville.....	24,985	20	8	50.00	25.00	35.00	—	5.00
Holyoke.....	21,851	24	14	54.08	8.32	50.00	—	—
Chelsea.....	21,785	11	5	9.09	27.27	9.09	—	—
Taunton.....	21,213	4	1	25.00	—	25.00	—	—
Gloucester.....	19,329	4	0	—	50.00	—	—	—
Haverhill.....	18,475	7	2	42.48	14.28	42.48	—	—
Newton.....	16,995	3	2	33.33	33.33	33.33	—	—
Brockton.....	13,608	7	2	42.84	12.28	24.56	—	12.28
Newburyport.....	13,537	6	3	33.33	16.66	16.66	—	—
Fitchburg.....	12,405	3	2	33.33	—	33.33	—	—
Malden.....	12,017	2	0	—	—	—	—	—
Eighteen Massachusetts towns.....	—	62	32	41.32	3.23	35.48	—	1.61

Deaths reported 3151 (no reports from Brooklyn, New Orleans, and District of Columbia): under five years of age, 1785: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 1305, diarrhoeal diseases 1019, consumption 317, lung diseases 123, diphtheria and croup 95, typhoid fever 49, measles 34, scarlet fever 32, malarial fevers 28, whooping-cough 23, puerperal fever seven, erysipelas three. From *measles*, New

York 21, Baltimore seven, Somerville two, Chicago, St. Louis, Charleston, and Nashville one each. From *scarlet fever*, Philadelphia nine, New York eight, Chicago five, Boston and St. Louis two each, Baltimore, Pittsburg, Buffalo, Milwaukee, Worcester, and Plymouth one each. From *malarial fevers*, New York 17, St. Louis six, Baltimore two, New Haven, and Springfield one each. From *whooping-cough*, New York 11, Philadelphia and Chicago three each, Baltimore two, St. Louis,

¹ Sixty-three deaths by drowning, twelve miles from the city, not included.

New Haven, Nashville, and Newburyport one each. From *cerebro-spinal meningitis*, New York five, Philadelphia, Chicago, Cincinnati, Pittsburgh, Nashville, Fall River, Lawrence, Holyoke, and Waltham one each. From *puerperal fever*, Boston four, St. Louis two, Chicago one. From *erysipelas*, Philadelphia, Cincinnati, and Providence one each. From *small-pox*, Philadelphia, one.

Fifteen cases of small-pox were reported from St. Louis; typhoid fever 17, scarlet fever 16, diphtheria 14, and measles 10 in Boston.

In 39 cities and towns of Massachusetts, with an estimated population of 1,180,189 (estimated population of the State 1,922,530), the total death-rate for the week was 28.43 against 22.22 and 27.01, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending July 14th, the death-rate was 22.2. Deaths reported 3660: diarrhoea 452, acute diseases of the respiratory organs (London) 195, measles 119, scarlet fever 79, whooping-cough 60, fever 55, diphtheria 30, small-pox (Newcastle one) one. The death-rates ranged from 9.8 in Cardiff to 96.9¹ in Sunderland; Birkenhead 13.5; Bradford 15.3; Leicester 16.1; Bristol 16.9; Leeds 17.5; Brighton 18.3; Birmingham 19.5; Sheffield 20; London

22.9; Liverpool 23.3; Manchester 25.8. In Edinburgh 13.9; Glasgow 23.7; Dublin 20.6.

For the week ending July 7th, in 000 German cities and towns, with an estimated population of 8,589,892, the death-rate was 38.8. Deaths reported 6406; under five years of age, 4058; diarrhoeal diseases 684, consumption 604, lung diseases 430, measles and röteln 160, diphtheria and croup 146, scarlet fever 86, whooping-cough 64, typhoid fever 45, puerperal fever 13, small-pox (Heilbronn two, Breslau and Bremen one each) four. The death-rates ranged from 19 in Karlsruhe to 67 in Berlin; Königsberg 31.1; Breslau 45.8; Munich 33.8; Dresden 34.9; Leipzig 35.7; Hamburg 38.5; Cologne 44.4; Frankfurt a. M. 29.8; Metz 30.2.

For the week ending July 14th, in the Swiss towns, there were 38 deaths from consumption, diarrhoeal diseases 18, lung diseases 17, whooping-cough five, typhoid fever four, measles three, diphtheria and croup three, small-pox one, scarlet fever one, puerperal fever one. The death-rates were at Geneva 13.3, Zurich 8, Basle 16.7, Berne 20.3.

The meteorological record for the week ending July 28th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

¹ This high rate is due to the registration of 177 deaths of children, resulting from the disaster at the Victoria Theatre, Sunderland.

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Daily Mean.	Maximum.	Minimum.	7.23 A. M.	8.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	8.23 P. M.	11.23 P. M.	7.23 A. M.	8.23 P. M.	11.23 P. M.	7.23 A. M.	8.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
July, 1883.	Daily Mean.																		
Sun., 22	29.940	77	87	64	84	63	74	74	SW	SW	W	7	14	7	F	F	O	—	—
Mon., 23	29.786	75	87	68	71	50	76	66	W	N	NW	8	14	9	C	O	C	—	—
Tues., 24	29.773	70	81	62	68	42	63	58	NW	N	NW	11	11	5	C	O	C	—	—
Wed., 25	29.911	67	80	62	61	52	78	64	N	S	SW	8	6	11	C	C	C	—	—
Thurs., 26	30.083	66	76	60	68	68	92	76	N	E	E	6	12	2	F	C	C	—	—
Fri., 27	30.172	67	73	56	70	63	90	74	E	SE	S	5	13	5	C	F	F	—	—
Sat., 28	29.955	68	73	63	93	93	93	93	S	SW	W	7	6	5	O	R	R	—	—
Means, the week.	29.945	78.6	86.8	56				72.6										15.40	1.07

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JULY 27, 1883, TO AUGUST 3, 1883.

TURRILL, H. S., major and assistant surgeon. Granted leave of absence for one month, to commence September 1, 1883. S. O. 77, Department of the Platte, July 26, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING AUGUST 4, 1883.

COLES, J. W., surgeon, ordered to the Naval Hospital, Philadelphia, Pa.

MARSTELLER, E. H., passed assistant surgeon, detached from the U. S. S. Hartford, and granted sick leave.

BRANSFORD, J. F., passed assistant surgeon, detached from the Naval Academy and ordered to the Hartford.

BOGERT, E. S., medical inspector, and FERREER, N. MCP., passed assistant surgeon, detached from the Navy Yard, Norfolk, Va., on August 30th, and ordered to the U. S. S. Trenton September 1st.

GATEWOOD, J. D., passed assistant surgeon, ordered to the U. S. S. Trenton September 1st.

KIDDER, B. H., surgeon, detached from the Naval Station, Port Royal, S. C., and ordered to the Navy Yard, Norfolk, August 30th.

APPOINTMENTS. BOSTON CITY HOSPITAL.—Dr. T. A. DeBlois has been appointed Assistant Physician to the Out-Patient Department for Diseases of the Throat.

Dr. F. H. Williams, Physician to the Medical Out-Patient Department.

BOOKS AND PAMPHLETS RECEIVED.—Treatment of Diseases of Infancy and Childhood, with over 400 Formule and Prescriptions, as exemplified in the Services of Drs. A. Jacobi, J. Lewis Smith, etc., etc. By Charles H. Goodwin, M. D. New York: Charles H. Goodwin. 1883.

Second Annual Announcement of the College of Physicians and Surgeons of Chicago. Session of 1883-1884.

Announcement of the Medico-Chirurgical College of Philadelphia. Sessions of 1883-1884.

La Coca du Pérou et ses Applications Thérapeutiques. Par le Docteur Lelong. Paris: Librairie, des Soirées Littéraires, A. Clavel, Éditeur. 1883.

? Quiz Compenda? No. 8. A Compend of Visceral Anatomy, especially adapted to the Use of Medical Students. By Samuel O. L. Potter, M. A., M. D., A. A. Surgeon U. S. A. With 41 Illustrations. Philadelphia: P. Blakiston, Son & Co. 1883.

The Lettsomian Lectures on the Treatment of Some of the Forms of Valvular Disease of the Heart. Delivered before the Medical Society of London. By A. Ernest Sansom, M. D., London, F. R. C. P., etc. Philadelphia: P. Blakiston, Son & Co. 1883.

On a Peculiar Cutaneous Lesion (Ulcus Elevatum) occurring during the Use of Bromide of Potassium. By E. C. Seguin, M. D. (Reprint.)

Original Articles.

A CONTRIBUTION TO THE TREATMENT OF
EMPHYEMA.¹

BY A. T. CADOT, M. D.

BEFORE proceeding to the consideration of the cases upon which this paper is based I wish to review briefly the mechanical principles involved in the expansion of a lung which has been compressed by fluid in the chest, and to show how this expansion may be favored by an appropriate dressing after the establishment of a free opening into the pleural cavity.

Suppose a case of empyema in which an opening has been made and the pus allowed to escape. Upon the removal of the pressure the lung at once expands somewhat by virtue of its own resiliency, and by the partial reestablishment of its circulation. Further, each contraction of the chest with closed glottis (cough or sneeze) presses the air from the well side over into the affected lung, partially expands this, and so forces the air or fluid in the pleural cavity out through the opening in the side. When the cough subsides, and the chest again expands, air rushes back to take the place of that just expelled. There are two avenues by which this returning air enters the chest; namely, the bronchus of the lung, and the opening into the pleural cavity.

If this latter opening be as free and unobstructed as the bronchus, the air has as ready access to the pleural cavity as to the bronchial tubes, and the pressure on the outside and inside of the lung being thus equalized it resumes its condition of semi-collapse.

If, however, the opening in the side is narrowed by the closing in of granulations or by the obstruction of a dressing, the air returning after a forced expulsion is somewhat opposed in its entry into the pleural cavity, while the bronchus admits it freely, so that the atmospheric pressure inside the lung is somewhat greater than upon its outer surface, and the dilatation effected by the cough is more or less maintained. It is thus that nature, with its fistulous openings, provides for the expansion of the lung, and we here, too, find the explanation of the gradual dilatation effected by the usual dressings of oakum or other absorbent material.

This gradual dilatation of the lung is liable to be interfered with by a provision of nature which here may act detrimentally to the healing process. I refer to the adhesion of the inflamed pleural surfaces when brought in contact. Of course, if the surface of a lung only partially dilated becomes firmly adherent to the parietal pleura, the further dilatation is greatly interfered with, and may become impossible. It is, therefore, very important to induce the lung to dilate to its fullest extent as soon as possible, so that the pleural adhesion, when it takes place, may bind things in their proper places.

That this rapid dilatation may be powerfully assisted by a proper dressing I shall endeavor to show.

The problem is to provide for the easy escape of air and fluids from the chest, and to obstruct the reentry of air into it.

A Lister dressing properly applied fulfils the required conditions more thoroughly than any other which I have seen in use. The method of application which I have found best is as follows:—

The tubes, of which I generally use two, side by side, are arranged so that they barely project within the chest wall, and the outer ends, after being securely fastened with safety pins and adhesive plaster, are cut off as close to the skin as possible. A handful of loose gauze wrung out in an antiseptic solution is placed around and over them, and over this a piece of mackintosh large enough to project in every direction beyond the gauze beneath it. Over this again are placed many (twelve to fifteen) layers of dry gauze, and lastly a sheet of cotton batting to provide for equal pressure. This whole dressing is held in place by a gauze or flannel bandage, some of the turns of which should go over the shoulder to prevent its slipping down.

The loose gauze next the tube catches and holds the discharge, which in a favorable case is reduced to almost nothing after the third or fourth dressing, and soon becomes serous.

This rapid diminution of the discharge under antiseptic treatment, and the fact that it speedily becomes serous in character, was pointed out some years since by Professor Lister; but he did not mention, and I have never seen elsewhere described, the great advantage of this form of dressing in favoring the expansion of the lung and obliteration of the cavity. This latter action of the dressing, which will, I think, be sufficiently manifest in the cases I shall report, is due to the method in which the mackintosh is applied.

This rubber layer, impervious to air, overlaps the gauze beneath it so that its edges are held closely applied to the skin by the elastic pressure outside. How closely it clings to the skin can only be appreciated by one who has frequently removed these dressings.

When, now, air is forcibly driven out of the chest by a cough, it lifts the edge of the mackintosh somewhat and escapes, but as the elastic outside dressings immediately press the mackintosh again to the side, the air which could lift it from within cannot get beneath it from without. It acts, in short, as a valve, allowing air to escape from under it, but not to get back again.

Dr. A. M. Phelps, of Chateaugay, N. Y., in an article in the *New York Medical Record* for April, 1880, upon The Treatment of Empyema by Valvular Drainage, recommends the use of a drainage tube with a valve attached which should allow the escape of fluids from the chest and prevent the entry of air. This contrivance I have never used, as I had already found that the antiseptic dressing accomplished this same object, with the additional advantage of guarding against septic absorption. I have, however, seen a valvular tube used by Dr. M. H. Richardson, who combined it with an antiseptic dressing, but did not find that it added to the efficiency of the dressing.

The following cases will illustrate the advantages of the antiseptic dressing, applied as I have described, both in preventing septic absorption and in promoting the expansion of the lung. They include all the cases of empyema which I have treated in this way, and one case (No. 3) which I saw with Dr. J. B. Swift, who operated antiseptically, and dressed the patient in the way I have described. All of these patients were operated upon under ether except where it is otherwise stated. The final removal of the tube in each case is emphasized as giving the date when the pleural cavity was finally closed. In none of them was there any reaccumulation or further discharge, and the opening always closed rapidly.

¹ Read before the Section for Clinical Medicine, Suffolk District Medical Society.

No.	Sex.	Age.	Medical Attendants.	Previous Duration of Disease.	Side Affected.	Previous Treatment.	Date of Operation.	Progress.	Result.	Remarks.
1	F.	11		1 month.	Right.	Aspirated once.	March, 1879.	Lung fully dilated three days after operation.	Tube removed on seventeenth day.	The lung was fully restored, and child recovered perfect health.
2	M.	29	Dr. R. Amory. Dr. F. I. Knight.	Uncertain.	Right.	Aspirated once. Fetid pus.	January, 1880.	Chill after operation. Normal temperature after second day. Attended business after ninth day.	Tube removed on twenty-eighth day.	Quickly recovered full health.
3	M.	1½	Dr. J. B. Swift.	2 months.	Left. Apex beat, below right nipple.	- -	February, 1880.	Lung dilated rapidly.	Tube removed on thirteenth day.	Operation without ether. Perfect recovery.
4	M.	33	Dr. J. L. Sullivan. Dr. F. I. Knight.	3 months.	Left.	Aspirated three times; twice serum, once pus.	May, 1880.	Improved for a time, then developed phthisis.	Died in the autumn.	The lung never dilated satisfactorily.
5	M.	14	Dr. J. L. Sullivan.	2 months.	Right.	Aspirated five times.	June, 1881.	Lung dilated rapidly.	Tube removed on twenty-third day.	Operation without ether. Only one tube introduced.
6	M.	22	Dr. J. W. Elliott.	Uncertain.	Left.	- -	June, 1881.	Lung did not dilate well.	Died at end of eight months.	Operation without ether, at the time regarded as palliative, as phthisis evidently existed.
7	F.	11	Dr. Chandler. Dr. F. I. Knight.	3 months.	Left. Apex beat under right nipple.	Aspirated twice.	July, 1881.	Heart in normal place, and respiration to the base of the chest twenty-four hours after operation.	Tube removed on thirty-eighth day.	Complete recovery.
8	M.	33	Dr. B. S. Shaw.	4 years.	Left. Heart beat only above right nipple.	Aspirated five times; four times serum, once pus.	August, 1881.	Lung never showed a sign of dilating.	Died suddenly on fifty-first day.	In this case two gallons of pus by measurement obtained at the operation. Autopsy refused.
9	M.	24	Dr. G. C. Shattuck. Dr. F. C. Shattuck.	3 weeks.	Right.	Aspirated once. Fetid pus.	December, 1881.	Chill after operation. Normal temperature after fourth day. Lung dilated rapidly.	Tube removed on twelfth day.	This patient had pneumonia in the newly expanded lung soon after the pleural cavity closed, but with no reaccumulation of pus. He made a good recovery from it. Seen one year later with lung in perfect condition.
10	F.	29	Dr. H. W. Broughton. Dr. H. I. Bowditch. Dr. F. H. Williams.	1 month.	Right.	Aspirated once. Fetid pus.	March, 1882.	Lung dilated well.	Tube removed on thirtieth day.	Opening quickly closed. No further trouble in the pleura.
11	M.	4	Dr. G. W. Snow. Dr. F. I. Knight.	1½ months.	Right.	Aspirated three times.	April, 1882.		Tube removed on forty-ninth day.	Opening quickly closed.
12	M.	3½	Dr. Hildreth. Dr. Dow.	5 weeks.	Left.	Aspirated once for diagnosis.	June, 1882.	Rapid dilatation of the lung.	Tube removed on thirteenth day.	Perfect recovery.
13	F.	26	Dr. Newell. Dr. H. I. Bowditch.	6 weeks.	Right.	Aspirated twice.	April, 1883.	Lung dilated rapidly.	Tube removed on twenty-sixth day.	Opening quickly closed.
14	M.	5½	Dr. J. A. Dow.	2 months.	Right.		June, 1883.	Lung dilated rapidly.	Tube removed on tenth day.	Opening quickly closed. Lung fully restored.

Of these fourteen cases, three died and eleven recovered.

Two of the fatal cases succumbed to phthisis, and in the remaining case the effusion had existed so long (four years) that the lung was without doubt converted into a mere fibrous cake at the top and back of the chest, and was totally unable to expand. The final cause of sudden death is unknown.

In all of the successful cases the empyema was of tolerably recent origin, so that in none of them was the lung disabled. The expansion of the lung was ordinarily very rapid. In Case VII., for instance, the heart had returned to the normal position and the lung had filled the chest at the end of twenty-four hours, and this, too, in spite of the fact that the disease had existed for three months. This rapid dilatation can, I think, be fairly ascribed to the suction power of the dressing which I have above discussed. The average time that the tube remained in the chest was twenty-four days, and this low average cannot be accounted for by the influence of the children (who notoriously do well) upon the statistics, for the average for the four adults is the same (twenty-four days).

These figures, when compared with the statistics of

the results of other methods of treatment, will go far to illustrate the advantages of the dressing I have described, and I feel sure that to obtain these results the mechanical action of the dressing must be intelligently regarded.

Dr. William C. Dabney, in the *American Journal of Medical Sciences* for October, 1882, in an article entitled *The Treatment of Empyema*, gives a summary of his conclusions as to the value of various methods of treatment, and says in a final clause that "Listerism would probably be advisable in city or hospital practice, but is of doubtful efficacy in the country, and under no circumstances should be allowed to interfere with through drainage."

This conclusion might be true if the only advantage of the Lister dressing were in the avoidance of septic infection. But if we consider the mechanics of the closure of these cavities, and seek to assist the expansion of the lung, we shall find the close antiseptic dressing a powerful aid in bringing about favorable results.

REMOVAL OF THE TUBE.

One of the two tubes introduced at the time of operation is best removed when the clots have all es-

caped and the discharge is reduced to about one fluid drachm in the twenty-four hours. The last tube is to be finally left out when the discharge dwindles to a few drops a day, when in short it is no more than would come from the sinus in which the tube lies.

I think the introduction of long tubes (catheters and the like) for injection of the cavity, as recommended by Fraentzel, is to be avoided, as you thereby separate the pleural surfaces already adhering and obliterating the cavity.

THE FETID CHARACTER OF THE PUS.

In the three cases in which the pus was fetid the recovery was not in the least interfered with by this circumstance. Two of these patients had a chill soon after the operation, but no ill effects followed it, the temperature rapidly fell to normal and stayed there. The odor disappeared in all of them after the third or fourth dressing, and recovery was uninterrupted.

ANTISEPTICS EMPLOYED.

At first I used carbolic acid exclusively as an antiseptic, but soon substituted chlorinated soda for it as an injection into the chest, using a solution such as described above. This proved so satisfactory that I later substituted it entirely for carbolic acid in the spray and various solutions, still continuing, however, to use carbolized gauze as a matter of convenience, it being easily obtained, and never giving rise to carbolism.

To show how small an amount of carbolic acid will cause poisonous symptoms in these cases I would cite Case XII. In operating upon this boy, four years of age, chlorinated soda was used for the spray and for moistening the inside dressings, but as chlorinated soda corrodes the instruments I laid them and the rubber tube in a carbolic solution, one part to thirty of water. This I also used to wash the boy's side before operating, and to cleanse my own hands. The minute quantity of carbolic acid which was conveyed to the wound by the instruments, tubes, and hand of the operator sufficed to cause frequent vomiting on the day after the operation, and to give the urine a dark, smoky color.

THE USE OF INJECTIONS INTO THE CHEST.

Professor Lister advises against the use of injections, and regards them as unnecessary. For the simple removal of the pus injections are certainly not needed, but in those cases in which there were purulent clots in the chest I found injections of the greatest service in removing them, and their complete expulsion is very important, as they keep up enough irritation to cause a continued secretion of pus, which quickly ceases when they are gotten rid of. When the pus is fetid, injections not only hasten the disappearance of the fetor, but speedily relieve the fever following the operation.

In using chlorinated soda for injections it will be noticed that if a strong solution be used it forms coagula with the serum. By the use, however, of a solution containing one part of liquor sodæ chlorinatæ to twelve or fifteen parts of water this may be partially avoided, and the coagula are then so soft and gelatinous that they readily escape through the tubes, and cause no trouble.

QUESTION OF OPERATION IN PHTHISICAL PATIENTS, OR WHEN THE LUNG HAS BEEN LONG COMPRESSED.

It seems as if little good were to be expected from making a free opening into the chest when the existence of phthisis is clearly proven, as such a case is unavoidably fatal, and the opening, if it is of any avail, only unnecessarily prolongs the sufferer's last days with the added distress of a disagreeable discharge from the side. Aspiration to relieve urgent dyspnoea is the only proper operative procedure in such cases.

Data are as yet insufficient to decide how long a lung may be compressed and yet recover and dilate to fill the chest when the pressure is removed. In our series two cases in which the compression had existed for three months rapidly recovered when the fluid was removed. On the other hand I have seen the lung reduced to a fibrous cake without a vestige of proper lung tissue by two years of compression. Cases of course will differ greatly in this regard, and it would be well in a doubtful case to aspirate several times, and carefully watch the lung, and if noticeable dilatation follows the aspirations finally to establish a free opening. If no dilatation occurs frequent aspiration may be sufficient to relieve dyspnoea, and eventually to bring about closure of the cavity by collapse of the chest wall and approximation of the neighboring organs. If, however, the pus constantly reaccumulates, and gradual exhaustion threatens a fatal issue, a free incision and the resection of portions of several ribs are clearly indicated to allow the further collapse of the chest and closure of the cavity.

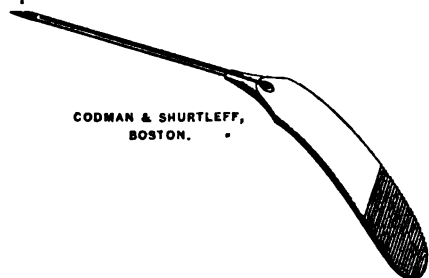
METHOD OF OPERATING.

In regard to the point selected for the opening, I almost invariably opened the chest in the eighth, occasionally in the seventh, intercostal space, just in front of the latissimus dorsi muscle. This place offers several advantages: the chest wall is here thinly covered by muscles; the opening is dependent in any ordinary position of the body except when lying on the other side, and yet is not so far behind as to be directly pressed upon when the patient is on the back; it is not so low as to be interfered with by the diaphragm even when this is considerably pressed upwards, as it may be after the fluid is out; it is far enough from the shoulder to allow a good dressing to be applied without interfering with the arm.

Lastly a word as to the technique of the operation.

In opening the chest near the base there is always danger of injuring the diaphragm or even, as has occurred, the abdominal organs, and the preliminary introduction of an aspirator needle is a common precaution to gain assurance of the presence of pus at the point selected. In some of my first cases I used a grooved needle for this exploration, and when pus was found, the groove of the needle guided the knife directly into the cavity, and in withdrawing it an incision of proper length could be made. The only drawback to this method was that with an ordinary grooved needle the elastic skin closed into and filled the groove, and thus prevented the pus from readily showing itself. To avoid this I had the needle, figured at the end of this article, made for me by Codman and Shurtleff, instrument makers. It is like an aspirator needle, with a slit upon one side wide enough for the point of the knife to slip along. This form makes it impossible for the skin to press into and oc-

clude the groove, and the pus always escapes readily along it. The handle is set at an angle to allow the ready use of the knife beside it. After the opening is made with the knife a director is slipped in, and the sharp needle removed. If after the incision one



instrument is withdrawn before another is introduced a slight shifting of the muscles may close the opening, which is then difficult to find again. The operation done thus with an exploring needle is finished ordinarily in a few seconds, and the pain is reduced to a minimum, an important consideration when ether cannot be administered.

MINOR INJURIES OF THE SPINAL CORD.¹

BY BENJAMIN H. HARTWELL, M. D., OF AYER.

THE subject presented for consideration to-day comprises a class of diseases arising from slight injury to the spinal cord, and is based upon the notes of nine cases, in which both the injury and the force used to produce it were slight. Five of the nine were passive or subacute hyperæmia, and four a mild form of chronic myelitis. These cases were of from two to twenty years' duration, and were not severe enough to prevent a certain amount of labor being performed.

Erichsen, in his work on Concussion of the Spine and Nervous Shock, says: "The primary effects and secondary results of slight injuries to the nervous system do not appear, as yet, to have received that amount of study and attention on the part of surgeons that their frequency and importance alike demand." These minor injuries are of special interest to us, as practical physicians, from their comparative frequency, their liability to result in permanent change in the substance of the cord, and because we can do much in the way of relief and cure by appropriate treatment.

Their importance in a medico-legal point of view is at once recognized; for while there could be no doubt of its gravity if the injury were severe, in the form under consideration there is not only no external sign, but a limited time may elapse without symptoms, of injury. The question presents itself here, as to whether we have in every case of injury to the cord sufficient evidence—objective symptoms—to enable us to determine the fact. Dr. R. M. Hodges² says: "The symptoms of actual organic changes in the spinal cord, when they follow concussion, are by no means vague and obscure manifestations. They are objective, and admit of recognition and appreciation. They are incapable of being simulated with an accuracy which will permit of long deception. The subjective symptoms following alleged concussion of the spinal cord

are ill defined, vary in degree and character, and such as permit of ready simulation. If objective and subjective symptoms are both present in any one case, as not infrequently happens, the objective symptoms predominate." Hamilton³ says: "I do not think that any jury should give damages unless some physical signs of actual spinal disease are present." While I would not like to take the position absolutely that the objective symptoms are well marked in every case of so called concussion, it must be rare indeed for a doubt to remain in the mind of one who has watched a case from the beginning. Those vascular disturbances which act as a cause of the symptoms in these cases, and which may be followed by inflammation, or changes in the substance of the cord, must soon produce a train of symptoms by which the lesion can be recognized.

CASE I. J. B., aged forty-four, a strong, able-bodied man, was shaken in a railroad accident, but not thrown from his seat. He was seen within a few minutes, and complained of pain in the lumbar spine and numbness in the extremities, chiefly on the right side. There were no external evidences of injury. The temperature, pulse, and respiration were normal. The catheter was used twice in the first twenty-four hours, but not afterwards, though he seemed to have a good deal of difficulty in starting the urine. The bowels were constipated. No special change took place until the tenth day, when there was a dusky, mottled appearance of the skin over the upper portion of the body, rapid breathing, cardiac murmur, intolerance of light, and muscular twitching. He stated that the left hand felt as if encased, that there was a band feeling around the left half of the body under the nipple, that he was unable to see plainly, and had a severe pain in the back of his head. He could move the left arm and leg better than the right, and there was some anaesthesia, more marked on the right side. This condition, changing to better then worse again, remained for several weeks, when improvement commenced, with the probability of perfect recovery.

In this case the objective symptoms were sufficiently prominent for us to pronounce it an injury of the right half of the cord.

In another case, where a locomotive demolished a carriage containing a young lady, and threw her some distance along the side of the track, she remained standing while being subjected to a thorough examination in view of possible litigation. There was no complaint of pain in the back, and not till the fourth day did symptoms denoting spinal injury show themselves, when she grew rapidly worse, was confined to the bed, but after five years has made a partial recovery.

That form of spinal injury produced by concussion, or the jar of the railway carriage, is an interesting one in view of the increasing number of men who by occupation are compelled to maintain an erect position for from six to twelve hours a day, subjected to the constant jar of the carriage. Hamilton⁴ mentions cases of subacute spinal hyperæmia occurring among city car drivers; and Hodges,⁵ in the paper referred to, speaks of the jar to which railroad men are exposed as being sufficient to produce nervous disease. The trifling jar seems necessary to produce hyperæmia, position alone not being enough. In Cases II. and III. a rough ride aggravated all the symptoms, while any position in

¹ Read at the Annual Meeting of the Massachusetts Medical Society, June 12, 1883, and recommended for publication by the Society.

² Boston Medical and Surgical Journal, April 28, 1881, page 389.

³ Nervous Diseases, 2d edition, page 271.

⁴ Loc. cit., pages 256, 257.

⁵ Boston Medical and Surgical Journal, April 21, 1881, page 365.

which the jar was removed gave comparative relief. Spinal hyperæmia is favored by the peculiarity of the circulation of the blood in the spinal canal; and we can readily understand how blood stasis, to a certain extent a natural result of these anatomical conditions, can become abnormal. Jaccoud says that the tortuous course of the veins and the absence of valves favors it. Bartholow¹ puts the arterial and venous capacity as one to four; that is, the capacity of the veins is four times that of the arteries.

CASE II. Mr. S., locomotive engineer, sixteen years on the road. General health good. After six years of service there was a sense of weakness and easy fatigue in the feet and legs, and pain in the back and head after hard drives. These symptoms gradually grew worse, and seven years after his condition was as follows: Temperature, pulse, and respiration normal. There was pain more or less constant, described as a "hard ache," extending from the sacral region up the spine, and through the head to the supra-orbital region. There were numbness, prickling, and formication in the extremities; the first two most noticeable below the knees, the latter on the back of the neck. The feet and hands were cold, the legs felt as if made of wood; at times, when the pain was excessive, he would stagger in walking, and in the dark had a constant fear of running into a post or other obstacle, so that it was his custom to walk in the middle of the street. If he stepped too heavily, or struck his hand firmly against an object, he would feel the blow in his head. He told me that he had stood on his toes during many miles of travel to avoid the jar. There was frequent urination. The rectum was not involved. He saw flashes of light, and sometimes felt as if a shade were placed directly over the eyes. There was lack of coördination; at times he could see best with one eye closed, it made no difference which one. There was some tenderness on deep pressure over the last cervical and first dorsal vertebræ. The cincture feeling was not present. Tendon reflex was natural. Ergot and belladonna were given in full doses; the latter afforded the most relief. After two months of rest he resumed his place on the engine, though not fully relieved; at the end of a year restoration to health seemed to be complete, and remains so after three years.

CASE III. Mr. M., conductor, has been on the road seventeen years. His physical condition is good. About seven years ago he commenced having pains in the lumbar region, and irregular pains down the left leg, with prickling and formication. When I saw him the trouble had increased, and involved both legs, the prickling and formication being most noticeable on the plantar surface of the feet and across the upper surface of the toes. There was occasional stiffness of the ankles, from muscular rigidity, and a feeling described as that of walking on a thick Brussels carpet, which would sink under the feet. There was a good deal of pain in the lumbar spine, and irregular pains radiating down both legs to the feet. These symptoms were always worse after a hard day's work, a long walk, a ride on the horse cars, and in hot weather. They were not present, as a rule, during the first part of a day after a night of rest. Latterly there have been some muscular cramps in the left leg, and the trouble seems to be extending. There is slight tenderness over the first lumbar vertebra. The pain in the leg is relieved in a

measure by strong flexion without regard to the position of the body. This case has but recently come under treatment.

The above were two cases of passive or subacute hyperæmia, the first involving the cervical, and the last the lumbar, enlargement of the cord. They were caused by the continued jar of the railway car, irrespective of any injury that might by its effects upon any portion of the spinal medulla predispose it to lesions of this kind. To what extent these diseases prevail among railroad employees I am not able to state, but a somewhat extended inquiry leads to the belief that they are more rare than has been claimed by some authorities.

Backache is said to be a common complaint among the class of men referred to, but I am ignorant of its cause, — whether it is muscular, in the sacral plexus of nerves, or depends upon an increased amount of blood in the spinal canal. In view of the cases just mentioned, which for the first few years were only indicated by an occasional backache, pain in the back among railroad men demands the closest investigation.

Most of the cases of which I have notes were caused by slight concussion, blows or other means, which produced no external signs of injury. The patients were able to attend in part to their daily duties. With some the trouble excited but little attention for months, although they were conscious of its effects, and gave a clear history back to the time when the injury was received. Rosenthal says: "In order to recognize the initial symptoms of myelitis we must pay strict attention to the first peripheral symptoms of medullary irritation. These are vague neuralgic pains, which are often unrecognized, or wrongly interpreted, circumscribed sensation of cold or numbness in the limbs, circumscribed anæsthesia, etc."

The following cases will serve to illustrate: —

CASE IV. Mr. P., twenty-three years ago, was injured in the United States service. While carrying one end of a long box the opposite end was dropped, and he felt the shock in the lower part of the spine. He served out his term of enlistment, and has since worked at his trade, that of cabinet maker. From the time of the accident he has had more or less pain in the back, prickling and numbness in both legs, chiefly in the soles of the feet, and a cord-like feeling from the superior spinous processes of the ilia around the back. For the past three years he has felt as if a cushion were interposed between the bottoms of the feet and the ground, the legs have felt heavy, and the toes have scraped the ground more or less in walking. He is apt to trip upon a stone or uneven surface. There is a good deal of muscular atrophy. The general health is good, though he has lost about thirty pounds in weight during the last few years. The bladder and rectum are not involved. Tendon reflex is absent in the left leg, and very slight in the right. There is some tenderness on deep pressure over the first lumbar vertebra. The most pain is experienced, and all of the symptoms are aggravated, after the completion of the work of the day. The best sleep is obtained during the first hour or two of the night, after which the position is frequently shifted, and the sleep disturbed by pain. Strongly flexing the legs and thighs gives some relief to the pain. He is worse during hot weather.

CASE V. A young, able-bodied farmer received an injury in the lower dorsal region by the sudden turning

¹ Medical News, December 16, 1882, page 673.

of a plow, caused by its striking a stone. He did not consult his physician for a year after the accident, although he felt pain from the first. At the end of two years his condition was much like that of Case IV., except that it was milder in degree. At no time had he given up the management of his farm, though compelled to obtain help for the harder portion of the work. In the course of a year cure seemed to be complete. He remains entirely well at present, three years after recovery, having in the mean time performed the hardest kind of farm work. Treatment consisted of moderate exercise, dry cups on each side of the spine opposite the lumbar enlargement, night and morning; galvanism; one half, increased to one, teaspoonful of the fluid extract of ergot, three times a day, occasionally combined with belladonna. The same treatment has been applied to Case IV., always with an amelioration of symptoms for a while, but circumstances over which I have no control prevent its being carried out satisfactorily; and, though still under treatment, the probability is that there will be a gradual increase of the disease.

The symptoms in these cases point, with hardly a doubt, to transverse lesions of the lumbar enlargement of the spinal cord. Case IV. is probably one of chronic myelitis, with impairment of the functions of the gray matter, and that the trophic function is becoming affected is shown by the muscular atrophy. Case V. is one of passive hyperæmia. Erb¹ says that "Hyperæmias do not always extend over the entire spinal canal, but often are confined to the cervical, or lumbar, or other portions;" and again, "in a few cases something is seen which lies between the condition of congestion and that of inflammation." The line between hyperæmia and myelitis is probably an artificial one; they may be regarded as different stages of the same disease. Profoundness of the disturbances of sensation and motion is perhaps the best point to judge by at first, if we are to make a distinction between them, and later the result of appropriate treatment, cure only resulting when hyperæmia alone exists. Therapeutically it makes no difference, as the treatment would be the same whether we have before us a case of passive hyperæmia or a mild form of chronic myelitis.

The early symptoms of some of these cases are like those of sciatica. Case III. was markedly so, the only complaint for the first three or four years being pain in the back and left leg. The location of the spinal lesion explains this, for Ranney,² in a diagram giving the relation of the spinal cord, nerves, and vertebræ, shows that the sciatic nerve rises from the lower portion of the lumbar enlargement of the cord, opposite the twelfth dorsal and first lumbar vertebræ. Tender points along the course of the nerve will help to distinguish a simple neuralgic affection; moreover, in congestion and inflammation, before many of the characteristic signs appear, there will be an aggravation of the symptoms after continued exercise, prolonged recumbent position, and during the latter part of the night and first part of the day; again, these cases are usually worse in hot weather. A history of injury to the back is so common that to be of value in diagnosis it must correspond to the appearance of first symptoms.

Reflected troubles, and those of a hysterical character, must be carefully excluded. In a case (not included in the nine) with a history of injury, and many

of the symptoms of spinal hyperæmia, complete relief was obtained by the removal of some vascular growths from the uterus with the curette. Trial of remedies will sometimes assist in diagnosis. In progressive cases, that is, in all acute cases, and in cases chronic as regards time, but in which there is locally an active state of the circulation, strychnia does harm, while ergot and belladonna will usually give relief to the distressing symptoms. In functional cases, on the contrary, and in those old chronic ones characterized by debility and loss of muscular power, strychnia almost always does good, and is sometimes very effective.

Some of the cases of minor injury of the spinal cord fully recover, others remain greatly relieved, and a few relapse into almost helpless cases of chronic myelitis. In the latter the change is frequently sudden. Those that get well are probably only hyperæmia. Of the nine cases which form the basis of this paper (the cases of concussion from railroad accident are not included), three remain cured after the lapse of several years, three are still under treatment, with a prospect of cure in one, one is gradually growing worse, one remains better than before treatment, and one, after seemingly being relieved of passive hyperæmia for two years, had a sudden lighting up of the disease, without apparent cause, and is a helpless invalid. The cincture feeling was present in all of the above cases, except the two caused by jar of the railway carriage; and, again, excepting these two, all were aggravated by the recumbent position maintained for more than a few hours at any one time. One voluntarily assumed the knee-chest position in bed to obtain relief from pain. As a rule, reflex excitability and electric contractility were not markedly changed; if at all, they were increased, though in Case IV. they were almost entirely absent, more so in the left than right leg. In a case of syphilitic myelitis, now under treatment, simply touching the bottom of either foot brings about spasmodic movement in both legs.

This paper would not be complete without giving an outline of the treatment which has been found beneficial in the above class of diseases of the spinal cord. Rest is of the first importance, not absolute in the recumbent position always, but in the sense of relief from care and ordinary duties. As previously mentioned, the patients in all of the nine cases noted were, at the time application was made for relief, engaged more or less actively in labor; and, although in two or three of them treatment was carried on without change in this respect, still it was much more satisfactory when partial or complete suspension of work was obtained.

Ergot and belladonna, as recommended by Brown-Séquard, have been found to be remedies of undoubted efficacy. Belladonna is more prompt in its action, especially when there is some vesical complication. Ergot is of most value when given in large doses, and long continued. The latter, usually in a few days, affords some relief to the intense pain in the back; the former, given so as to produce its full medicinal effects, in many cases stops all pain for the time, and if continued has a permanently good effect. In acute cases ergot seems to do harm, and digitalis, acornite, and bromide of potassium should be given instead. In Case I. ergot aggravated the symptoms on two trials, while the good effect of digitalis was seen, to a certain extent, within a few hours after administration. Bartholow³ says: "Its [ergot] administra-

¹ Ziemssen, vol. xiii., p. 203.

² Applied Anatomy of the Nervous System, page 340.

³ Medical News, December 16, 1882, Clinical Lecture.

tion in spinal inflammation is improper, because of the peculiarity of its action. It induces an anæmia of the arterial distribution, — an ischæmia, properly speaking, — but the blood thus driven from the arterial side accumulates on the venous side." Sponging the spine with water as hot as the patient can bear it, the sponge being drawn rapidly along the whole length of the spine for ten or fifteen minutes morning and night, with the daily application of an irritant to the same surface, does good in either the acute or chronic forms of the disease under discussion. Peripheral irritation surely has some effect upon the nutrition of internal organs, especially when these organs are placed in direct anatomical relation to the surface. The results published by Strumpf, of the treatment of spinal sclerosis by the faradic brush, are strong proofs of the power of mild peripheral irritation.

Galvanization has been proved to act upon the cord itself, and is one of the best agents that we have in the treatment of the chronic form of spinal troubles. Unfortunately, in private practice in the country it is impossible to use it in every case with that frequency and perseverance necessary to produce good results. In one case it seemed to aggravate the symptoms; in the few others in which it was used it was undoubtedly a help. Dry cups, placed on each side of the spine, once or twice daily, are means which should not be omitted in the treatment of any form of spinal congestion or inflammation. In addition, the patient should be placed in the best possible condition as regards his surroundings, diet, clothing, amount and nature of exercise, avoiding dorsal decubitus, but resting upon the side, or with elevation of the body, shoulders, and head, as may be determined by trial to give the most relief.

There are other remedies of known value, but the above have been applied in the treatment of the cases considered in this paper.

FIBROMA OF THE VAGINA.

BY EDWARD T. CASWELL, M. D., PROVIDENCE, R. I.

In the number of this journal for July 19, 1883, Dr. Davenport, in his report on Recent Progress in Gynæcology, refers to an article of Professor Kleinwächter's upon Fibromata and Myomata of the Vagina, in which the latter states that he has been able to collect but fifty cases of these tumors recorded in medical literature, and adds to these three of his own. As eight days previous to the above date I had operated upon a case of fibroma, which had been the first of my own experience, and as from the above statement I conclude that such growths are at the least not common, I venture to place it on record.

The patient was a young lady, who was soon to be married, and who had been aware of some obstruction in the passage for about two years. Latterly the obstruction had seemed to increase. There had been no pain, and no disturbance of the menses. Some inconvenience was experienced in walking, and some in sitting. On examination I found a tumor in the middle line of the anterior wall, over the course of the urethra, as large as a pigeon's egg, its anterior extremity being about three quarters of an inch back of the meatus. It was not sensitive to pressure, and had a slightly elastic feel. An operation was advised for many reasons, not the least of which was the relief from anxiety that it would afford the patient in view of her approaching marriage.

A single incision in the middle line enabled me to easily enucleate the tumor, which measured in its long diameter about one and a half inches, and about three quarters of an inch in each of its other dimensions. Under the microscope it proved to be a fibroma. There was but little hæmorrhage, and the wall of the urethra was uninjured. Two or three sutures of catgut, with a small piece of drainage tube, some absorbent cotton, and a napkin, was all that was required in the way of dressing. Carbolyzed injections were freely used, and the catheter passed for three or four days. The tube was removed on the third day. The recovery was uninterrupted, save for a slight hæmorrhage on the day after the operation, which was checked by an injection of hot water. The wound was entirely healed by the eighth day, and the patient dismissed on the tenth. Except for the slight discharge of the first few days the young lady was conscious of no departure from her usual condition of health.

REPORT ON PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.

BY F. I. KNIGHT, M. D.

TUBERCLE OF THE LARYNX AND LUNGS WITH CANCER OF THE STOMACH IN THE SAME PATIENT.

DR. SCHIFFERS¹ showed the larynx at the Medico-Chirurgical Society at Liège. The patient had suffered from pulmonary tuberculosis and from gastric troubles. The posterior third of the left vocal cord was swollen and immovable; the right cord also was paralyzed. At the post-mortem examination, besides the usual tubercular lesions in the lungs, a cancerous tumor was found in the stomach near the pylorus, causing such a narrowing of the orifice as hardly to admit the tip of the little finger. The mesenteric glands were swollen and often caseous. The larynx presented a large tuberculous cavity affecting principally the posterior part of the left vocal cord.

ANEURISM OF THE AORTA CAUSING BILATERAL PARALYSES OF THE VOCAL CORDS.²

The physical signs of aneurism were not well marked, but the laryngoscope showed complete paralysis of both abductors of the vocal cords. Tracheotomy was performed without relief to the dyspnoea. Autopsy showed an aneurism, as large as the fist, of the descending aorta, flattening out the left recurrent nerve, but the right nerve was at some distance, and apparently unaffected. The cardiac plexus, however, had been compressed between the trachea and aorta.

Two similar cases are recorded in the Pathological Society's Transactions by Drs. Bäumlér and George Johnson,³ but in these cases there was no note of any pressure on the cardiac plexus.

ARREST OF ACUTE CORYZA.

According to Dr. Gentilhomme⁴ sulphate of atropia (from a quarter of a milligramme to one milligramme) given as a pill has an immediate effect on the first stage of coryza, often arresting the progress of the disease. It also produces great relief when the coryza is confirmed, but its action is less remarkable than at the

¹ Ann. de la Soc. Med. Chir. de Liège, June, 1882, and London Medical Record, October 15, 1882.

² Whipple, British Medical Journal, May 13, 1882.

³ Vols. xxiii. and xxiv.

⁴ Rev. Med. Française et Étrangère; London Medical Record, October 15, 1882.

beginning of the inflammation. When bronchitis exists at the same time the remedy produces an equally favorable effect on the bronchial mucous membrane. The employment of atropia is based on the fact that it has the power of diminishing the nasal mucous secretion even to the extent of completely drying it up, and at the same time it acts upon the vessels by relieving their congestion. [This use of belladonna has long been known, but is, perhaps, too much confined to homeopaths at the present time.]

ON THE POSSIBILITY OF INTRODUCING A TUBE INTO THE LARYNX WITHOUT PRODUCING PAIN OR ANY REACTION.

Dr. Brown-Séquard¹ announces that he has discovered the following facts: After exposing the larynx of animals by an incision in the side of the neck, a current of carbonic acid being applied for a short time (fifteen seconds to two or three minutes), the sensibility of the larynx is completely lost, so that a tube or the finger (in case of a large dog) could be introduced and moved about without producing any reaction. This local anesthesia lasts from eight to ten minutes. No bad effect followed either general or local. Farther experiments are necessary to determine whether sufficient carbonic acid can be used locally to produce anesthesia in man without danger. These Dr. Brown-Séquard proposes to make.

FOREIGN BODIES IN THE AIR-PASSAGES.

Dr. Weist² publishes a very interesting communication on this subject. The paper is based on 1000 cases, 897 of which are reported as never having been published. Dr. Weist draws from a study of these cases a different conclusion in regard to the propriety of bronchotomy from that generally held at the present day, which he states to be that, as a general rule, "the certainty of the presence of a foreign body in the air-passages makes bronchotomy necessary." This rule rests principally on the statistical tables of Gross and Durham. Dr. Weist says that these tables certainly seem to afford a sufficient basis on which to rest the conclusion that in cases of foreign bodies in the air-passages bronchotomy offers a far better chance of recovery than waiting for spontaneous expulsion. Adding the cases of Gross and Durham together the result is a total of 722 cases; 356 without operation, with 59.55 per cent. recoveries, and 40.49 per cent. deaths. With the operation 366 cases; of these 76.77 per cent. recovered, and 23.22 per cent. died, a difference of 17.22 per cent. in favor of the operation.

Dr. Weist, in 1867, collected and published a table of 163 cases, the results of which were so greatly at variance with those heretofore published that, on the advice of Professor Gross, he was led to continue the collection of cases. Hence the present large table with so many cases never published before. In 63 cases the foreign body was removed by operative measures other than bronchotomy, for example, with forceps, with or without the aid of the laryngoscope. These are excluded in calculating the chances of recovery afforded by bronchotomy compared with those by following the plan of non-interference. There remain 937 cases; of these 599 were not subjected to bronchotomy; 76.79 per cent. recovered, and 23.20 per cent. died. Bronchotomy was performed in 338 cases; 72.48

per cent. recovered, and 27.42 per cent. died, a difference in favor of non-interference of 4.31 per cent. As a result of the study of the combined cases of Gross, Durham, and Weist (1674 in all) it appears that without operation there is one death in 3.5 cases, and one in 4 after bronchotomy.

Dr. Weist says that in presenting these facts he is not seeking to bring bronchotomy into discredit in cases of foreign bodies in the air-passages. In a large number of cases the larynx or the trachea must be opened to save life. He is striving to show that the present accepted rule is too broad; that in many cases when it is certainly known that the trachea or bronchia contain a foreign body the patient will be more likely to recover if trusted to the chance of spontaneous expulsion than he will if subjected to operation. Then Dr. Weist goes on to help determine in what cases bronchotomy should be performed. [It seems to us that this difference in cases furnishes the clew to the results in the tables, and makes them of little value in the light in which the author regarded them. It is fair to infer that the bronchotomy class included all the difficult cases, and the other all the easy ones, that is, where the body was soon expelled spontaneously or caused little disturbance.] The author says that when the nature of the foreign body is known the propriety of an operation can be more easily determined than when it is not, as it is apparently settled that some substances are more easily expelled than others. Seeds are more easily expelled than other substances usually lodged in the air-passages. Dr. Weist shows from his tables that spontaneous expulsion of seeds and recovery took place in a larger per cent. than in the cases subjected to bronchotomy. [We fail to see the point of the argument in this; as a rule, probably, only those where spontaneous expulsion had not taken place, and symptoms were urgent, the hard cases, were subjected to the operation.]

It very rarely happens that a surgeon sees a case of this accident during the paroxysm of strangulation that immediately follows the introduction of a foreign body into the air-passages. Whenever the symptoms continue urgent, or attacks of threatening suffocation come on frequently, bronchotomy should be resorted to without unnecessary delay, provided that direct extraction is not practicable.

Dr. Weist draws the following conclusions from a study of these cases:—

(1.) When a foreign body is lodged either in the larynx, trachea, or bronchi the use of emetics, errhines, or similar means should not be employed, as they increase the sufferings of the patient, and do not increase the chances of recovery.

(2.) Inversion of the body and succussion are dangerous, and should not be practiced unless the wind-pipe has been previously opened.

(3.) The presence simply of a foreign body in the larynx, trachea, or bronchi does not make bronchotomy necessary.

(4.) While a foreign body causes no dangerous symptoms bronchotomy should not be performed.

(5.) While a foreign body remains fixed in the trachea or bronchi as a general rule bronchotomy should not be practiced.

(6.) When symptoms of suffocation are present or occur at frequent intervals bronchotomy should be resorted to without delay.

(7.) When the foreign body is lodged in the larynx,

¹ La France Medicale, October 3, 1882.

² American Practitioner, August, 1882.

there being no paroxysms of strangulation, but an increased difficulty of respiration from œdema or inflammation, bronchotomy is demanded.

(8.) When the foreign body is movable in the trachea, and excites frequent attacks of strangulation, bronchotomy should be performed.

EXTIRPATION OF THE LARYNX.

Professor Burow, of Koenigsberg, has a very interesting paper on this subject in the *Archives of Laryngology* for April of this year. As a résumé he lays down the following points:—

(1.) Total extirpation of the larynx in cases of carcinoma has as regards danger to life, as well as in the matter of absolute cure, given hitherto little encouraging results, forty per cent. of the cases eventuating in death after the operation, these figures swelling to seventy per cent. of cases of death due to a relapse of the disease.

(2.) Notwithstanding this operative essays in this direction should be continued with the following restrictions: (a) the patient's age should not exceed sixty years; he should be comparatively strong, and free from serious complications; (b) the disease must be confined to the larynx, the surrounding glands, muscles, etc., being unaffected.

(3.) In all other cases where dyspnoea is present tracheotomy should be promptly performed.

(4.) The prognosis in cases of sarcoma is much more favorable. Benign tumors encroaching on the calibre of the larynx to a marked extent might also furnish an indication for the operation.

(5.) Syphilitic processes, necrosis of the cartilages, and papilloma do not call for total extirpation of the larynx.

(To be concluded.)

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

MAY 9, 1883. The meeting was called to order at 8.05 o'clock by DR. G. B. SHATTUCK, chairman.

No pathological specimens being offered for exhibition, the first business was the reading of a lengthy and valuable paper by DR. A. T. CABOT, entitled

CASES OF EMPYEMA, TREATED ANTISEPTICALLY.¹

but which was in reality a most interesting and instructive contribution to the surgical treatment of this disease, aided by antiseptic precautions, and resulting in a percentage of recoveries, and a diminished period of treatment which seems most astonishing when we remember the usual progress of convalescence from this affection, even in uncomplicated cases, under the treatment which has been generally adopted for their relief.

DR. HARLOW asked how large the incision must be to accomplish thorough drainage from the chest and afterward to accommodate the drainage tubes?

DR. CABOT replied that the tubes employed were the largest which could be introduced between the adjacent ribs, and that the incision need only be large

enough to allow them to be introduced. The tubes should be long enough to reach the surface of the pleura, without projecting into the cavity of the chest. They thus cause no irritation, but provide for the complete and continuous drainage of the chest, which is at the same time protected by the mackintosh from any outward infection, thus ministering in every possible way to a speedy and perfect recovery.

DR. HARLOW asked if a solution of permanganate of potassa might not be employed as a disinfectant?

DR. CABOT replied that this had been used, and with good results, but he is fully satisfied with the solution of chlorinated soda, one part to twelve of water, which removes all the flakes of pus from the cavity of the chest, and is a thorough disinfectant without inducing poisonous symptoms, as carbolic acid is often prone to do. In one of the reported cases the use of carbolic acid for washing the chest previous to the operation, and for rendering the operator's hands and the instruments aseptic, was followed by symptoms of severe carbolic acid poisoning in the patient, which did not entirely subside for thirty-six hours. From the liability to this accident he has discarded carbolic acid and now employs the solution of chlorinated soda in all cases, and is well satisfied with the change.

DR. M. H. RICHARDSON spoke at some length in relation to a variety of tubes for drainage of the pleural cavity which are supplied with valves for the mechanical exclusion of air and impurities from the thoracic cavity while offering no resistance to the passage outwards of fluids from the chest. He had employed these tubes in several cases in which they might be expected to give good results if at all, but they had disappointed his expectations in every instance, causing unfavorable symptoms in all the cases, and utterly failing to act as barriers to infection of the pleural cavity from the outside of the body. Dr. Richardson said he entirely agreed with the views of Dr. Cabot in relation to the prognosis in the operation for empyema in phthisical subjects, as his experience in this direction had afforded an unfavorable course of the disease in every case operated upon. In these cases the lung did not expand after the chest was opened and the fluid liberated, but the cases drag on for years or die earlier from the development of some rapid form of phthisical disease.

DR. DRAPER asked how the time was determined at which the drainage tube should be removed. Is it regulated by the amount of discharge from the open end or by the character of the discharge? It has been a source of great uncertainty in thoracentesis to know when the opening might be allowed to close.

DR. CABOT replied that he removed the drainage tube at any time when he felt sure that the discharge was not more in quantity than that coming from the walls of the incision around the tube. The opening usually closed quickly and permanently.

DR. H. I. BOWDITCH regarded Dr. Cabot's antiseptic valvular method as a most invaluable addition to the present treatment of empyema. The rapid cures of Dr. Cabot's cases had convinced Dr. Bowditch of the value of Mr. Lister's antiseptic dressings. These, with the valvular appliances as prepared and used by Dr. Cabot in the cases reported, had been most convincing. Hitherto Dr. Bowditch had not felt assured of the great value of antiseptics, because he had seen many cases get well without them. It would seem from Dr. Cabot's results that the treatment of empyema, in

¹ Vide page 145 of this number of the JOURNAL.

proper cases, by a permanent opening, was about to become almost upon a par with aspiration in its simplicity and rapidity of result. Dr. Bowditch regarded with pleasure this latest step in the idea of removing fluids from the thorax; and certainly to one who can remember when that operation, even with an exploring trochar, was either sneered at or opposed by all as dangerous, the cases reported here to-night are most encouraging. Dr. Bowditch remarked upon the operation of injecting fluids into the chest, that we had often heard that it was dangerous; some physicians in fact, were unwilling to use them. Deaths had occurred in consequence. Dr. Bowditch had no such fear, provided proper precautions were taken. We must be careful never to inject so much as to cause the least dyspnoea or distress to the patient. If too much were thrown in, the heart or the healthy lung might be compressed, and thus the breathing or the circulation might be disturbed, or perhaps fatally obstructed.

In connection with this subject, Dr. Bowditch referred to the case reported¹ of a young girl in Glasgow who was taken ill September 24, 1882, and upon whom, October 14th and 19th, owing to orthopnoea and threatening fatal symptoms, aspiration was performed by Dr. W. T. Gairdner, of Glasgow. Seventy ounces of exceedingly fetid pus were removed on the 14th, and on the 19th twenty ounces, which was less fetid. On the 20th a free opening was made by Dr. Buchanan, professor of surgery. Two tubes of Gooch's double canula were introduced, crossing each other, and eight gallons of diluted Condy's fluid were allowed to flow in and out by a siphon apparatus. This, of course, made little or no pressure on the internal organs, but simply washed out the pleural cavity till the fluid came out as pure as it entered. A large tube for drainage was then inserted. In five weeks the discharge ceased and the patient was well. Dr. Gairdner said the case was unique in his experience. Dr. Bowditch had never seen one comparable with it. Though Dr. Cabot's valvular plan was not followed in that case, Dr. Bowditch regarded the free and safe method pursued in injecting antiseptic fluid and the large opening as important factors in the cure.

Dr. A. N. BLODGETT remarked that to any one who had observed the ordinary course of recovery in a case of operation for the relief of empyema as this was formerly done, the history of the present cases cannot fail to be very interesting. He recalled a case, well known in its time, which occurred in a boy of thirteen under the care of Dr. Minot. The operation was performed with all known precautions, and the case eventually did well, recovering completely, which condition still exists, and the patient is a strong and vigorous farmer. The course of the disease was, however, vastly different from the cases reported by Dr. Cabot. The discharge continued purulent for months, the patient became much exhausted, and suffered from hectic and night sweats, and for a long time was in a condition to excite grave apprehension. The tube was small but long, and of silver, and was not permanently removed until months after the operation. Even after this was done an abscess formed upon the site of the opening into the chest, and discharged a quantity of pus. A smaller amount was once subsequently evacuated in a similar manner. The discharge was always purulent, and at the time of the primary operation and at various subsequent periods was horribly offensive. Exam-

ination two years after the operation discovered that vesicular respiration upon the affected side had been fully restored, and there was absolutely no discoverable pulmonary symptom by which the existence of any previous disease of the chest could be detected. It would seem that this case under the present mode of treatment would have afforded a result equally brilliant with those detailed by Dr. Cabot, as family history and previous health had both been unexceptionable in this patient, and perfect recovery was at length obtained notwithstanding the temporary occurrence of unfavorable symptoms depending probably upon absorption of septic matters from so extensive a surface of putrid suppuration.

Dr. GEORGE B. SHATTUCK concurred in the opinions expressed by Dr. Cabot and Dr. Richardson regarding the unfavorable prognosis attending the opening of the chest in cases of incipient phthisis. His observations upon patients in the City Hospital as well as upon those in private practice point conclusively to an unfavorable result from the operation in this class of cases. Such a personal or family history is of almost fatal importance in relation to a permanent opening in the chest wall.

Dr. CABOT called attention to the great rapidity with which the lung expanded after the dressing described in this paper, sometimes a few hours being sufficient for a full return of the pulmonary structures to their normal position in the affected side. Case XI. of the list reported in this essay presented a very striking example of this. In this patient the apex of the heart was found beneath the right nipple, whither it had been forced by the large purulent effusion within the left pleural cavity. In *eighteen hours* the heart had resumed its normal position, and the apex beat was found beneath the left nipple in its usual place. Thus in this short time the whole heart had moved bodily to a very considerable extent, the apex traveling in this time the entire distance from the right nipple to the left nipple without detriment to its organic function or to the system at large. At the same time respiration had returned to the affected side and was heard at the very bottom of the chest.

Dr. LYMAN observed that the shortness of the time for complete recovery was certainly very remarkable, the time of convalescence usually having been very long.

Adjourned at 9.30 P. M.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. SUCKINGHAM, M. D., SECRETARY.

JUNE 11, 1883. DR. CHARLES D. HOMANS presided. DR. MINOT reported the following cases:—

OBSCURER CASE OF ASCITES AND ANASARCA.

CASE I. The patient, a man fifty years old, entered Massachusetts General Hospital in November, 1882. His family history was good, but he had been a hard drinker for many years. He stated that he had had syphilis, but there were no symptoms of that disease, and the account was very obscure. He had also had palpitation and slight dyspnoea for many years. During the five months preceding his entrance he had progressive enlargement of the belly and swelling of the legs. The abdomen was much distended

¹ London Medical Record, March 15, 1883.

and fluctuating; the patient suffered from dyspnoea, and could not lie down; there was great oedema of the lower extremities and of the scrotum. The urine was high colored, acid, density 1018, contained a trace of albumen and a few hyaline and finely granular casts. He was tapped twice, seventeen and a half pints being withdrawn from the abdomen the first time, and eight pints three weeks afterwards, and he left the hospital. Five weeks afterwards (January 21st) he entered again with similar symptoms, and he began to fail steadily. The pulse became rapid, feeble, and intermittent, and the dyspnoea was at times very great. There was no cardiac murmur, and the impulse was not feeble. He had an inguinal hernia, which in the dropsical condition of the skin could not be kept up by any apparatus. It was necessary to tap him repeatedly. It was thought he could not live long. May 3d six drachms of Epsom salt were given in saturated solution, which acted freely, affording some relief, and it was repeated every few days. May 16th fifteen minims of tincture of digitalis were ordered in addition; copious diuresis at once set in, and by June 1st all traces of the ascites and oedema had disappeared; the heart's action, meanwhile, became regular and full, averaging eighty in the minute, and only intermitting occasionally. The liver was felt to be of the normal size, and no increased cardiac dullness was found. The patient was discharged to-day, well.

The diagnosis on the patient's entrance was cirrhosis of the liver, but Dr. Minot thought that must be abandoned. In the absence of distinctive signs of disease of the liver, heart, or kidneys sufficient to cause the long-continued and excessive dropsy, he was unable to give any plausible conjecture as to the nature of the disease.

PARALYSIS OF LOWER EXTREMITIES FROM LEAD;
RAPID RECOVERY UNDER IODIDE OF POTASSIUM.

CASE II. A woman, twenty-eight years old, entered the hospital April 25th. She had been married two years; never pregnant. She said she had contracted syphilis at the age of fifteen, having had sores on the vulva, some sore throat, night-pains in the legs, and loss of hair; but no eruption. Nine days before entrance she suddenly felt severe pain in the left knee, which was followed by numbness of the limb and inability to move it. Five days later there were prickly feelings in the right foot, and in the fingers. There were no appearances that could be ascribed to syphilis. The patient was thin and looked feeble. There was very little movement of the left leg. The plantar reflex was less good than in the other leg; sensation was about equal in the two. There was no difference in reaction to the faradaic current in the two legs, but in the left arm the response was more feeble on the radial side. The patient could not stand. No patellar reflex could be obtained in either limb on carefully testing. There was no ankle clonus. An indistinct blue line was observed on the gums, but no history of colic, and no wrist drop. The patient had no knowledge of being poisoned by lead in any way; but the urine was found on analysis to contain a considerable amount of lead. The pupils were normal, and an ophthalmoscopic examination of the eye showed no disease. She was ordered ten grains of the iodide of potassium three times daily, which was gradually raised to twenty-five grains three times daily. She soon began to improve, and on May 14th she could walk across the room

slowly without support; on the 21st she walked down stairs and in the garden. On the 26th she was discharged, well. There was a very slight patella reflex in the left leg, but none in the right. June 5th she returned for inspection, in good health, with good patella reflex in both legs.

DR. MINOT said that if he had not seen several cases of paralysis from lead which improved as rapidly as this under the iodide he might have considered this to have been a manifestation of constitutional syphilis. But the length of the interval between the last syphilitic symptoms and the present attack (twelve years), the absence of any such now, the presence of the lead line (though doubtful), and the discovery of the lead in the urine, all pointed to poisoning by that metal, and such cases were sometimes mistaken for other nervous diseases, especially progressive muscular atrophy.

DR. FIFIELD said that in the absence of a very positive lead line on the gum and of other symptoms he thought it going far off for a diagnosis to accept lead poisoning, neglecting syphilis, which was to him much more evident. Syphilitic paraplegia does not of necessity depend on gummy tumor and pressure on the cord. We may get nervous syphilitic symptoms as dilated arteries, and as deafness from affection of the auditory nerve, which are not known to be due to gummy tumor.

DR. MINOT, in reply to Dr. Fifield, said that in the first case there was no fever.

DR. FIFIELD spoke of the uncertainty of diuretics, and also of dysentery as a cause of ascites not often mentioned, but sometimes occurring, and he reported a case in which both ascites and hiccough were results, ascites making its appearance as dysentery was getting well.

DR. ABBOT asked if we could now be sure that the first case was not one of cirrhosis. It is well known that these cases may be tapped and refilled many times, and then go some time. He has known a case to go two years under such circumstances.

DR. MINOT stated that there was no decrease in the size of the liver.

DR. ABBOT also spoke of the uncertainty in the use of diuretics. He had known great ascites and anasarca in Bright's disease to disappear without the use of any drug. The patient had no physician until later in the disease.

DR. FIFIELD said that such good effects of iodide of potassium in lead paralysis are surprising. Treatment has vibrated between purgatives and the iodide. The speaker thought that one gets better effects from a combination of bromide of potassium with purgatives than from the iodide alone.

DR. WHITE said that so far as one can judge from the result of treatment, always a doubtful way of forming an opinion, he should think with Dr. Fifield that this case was one of syphilis.

DR. MINOT said that he had seen several cases of paralysis, many of which he had reported to this Society, in which iodide of potassium had had a good effect.

DR. WEBBER said that he had had many cases of lead poisoning in which the elimination of lead was increased by the use of iodide of potassium. He has seen cases in which lead appeared in the urine for the first time during the administration of the iodide, and stopped when the drug was stopped, to reappear when it was resumed. This has happened over and over again,

and he looked on it as proof. He had seen the gum line and the paralysis disappear during its use. He had been in some cases obliged to stop or diminish the iodide because of its producing lead colic, coming down to even a half grain or two grains. This last is not a symptom met with where the patient is merely intolerant of iodide of potassium. The speaker was doubtful if there is anything gained by the use of larger doses of the iodide than five or ten grains, but he has not tried. He mentioned a case in which there was double wrist drop with atrophy of the extensors leading to concavity in place of the roundness of the arm, and with a heavy lead line on the gum. The patient took ten grains of the iodide, getting some return of motion in five or six months, an almost complete disappearance of the lead line in eight months, and ability to do a good day's work in two years.

DR. GEORGE W. GAY read a paper on

THE MANAGEMENT OF PATIENTS DURING CAPITAL OPERATIONS.¹

DR. HODGES expressed his agreement with the reader. The duration and degree of etherization are of an importance which is apt to be overlooked, particularly by the young men who administer anæsthetics in our hospitals. Without the cognizance of the operator patients are often more deeply narcotized than is either necessary or advantageous by lavish use and crowding of the ether. Expedition, or, at least, the avoidance of unnecessary delay, in the actual performance of an operation, is also of much consequence. Demonstration, clinical remarks, consultation, the examination of interesting points by others than the operator are not infrequently detrimental, even though the patient's insensibility tempts such indulgences. That the element of time taken in operating is a matter of no moment is not, perhaps, so generally believed now as it was in the earlier days of anæsthetics. Even though a patient is wholly unconscious of pain, the shock of an operation, if its nature or the subject's condition occasions any, is rallied from in direct proportion to the duration of the procedure, and to the greater or less profundity of the etherization; and this is especially true of operations performed upon children.

DR. WARREN thought the reader had made some very good points. He thought it a question if the profoundness of etherization is not at times carried too far. He believed he had seen sinking beginning under a load of ether, and going on to end in death. By this he did not mean that there is any specific danger attaching to ether, but that it is one of the elements of an operation, and is to be considered. Movement is a danger to a feeble system. He had seen a patient go into collapse after being placed on the table, and die without being etherized or any operation taking place. He had in one case operated in the ward rather than carry a patient to the operating room, the reason being that the pulse became poor on starting. This patient recovered. Patients are apt to lose heat in the moving about before operation. All these are factors to be considered. Rapidity has been eliminated by the use of anæsthesia and still more by the use of the Lister dressing. This ought to be avoided. In the speaker's opinion there was a tendency to operate too early in bad cases. The pulse often improves in six or eight hours.

DR. FIFIELD, while agreeing in the main with the

¹ Reserved for publication.

previous speakers as to the value of speed, warmth, and little movement, said that he was at a loss to understand how the administration of ether can be a factor in causing an after state of death. It had always seemed to him an admirable stimulant. We can sometimes by its use put off death for minutes and hours. The stimulating effect of the subcutaneous syringe full of strong ether is a recognized fact.

TREPHINING THE RIBS.

DR. FIFIELD spoke of this operation, of which he had learned at the meeting of the American Surgical Society at Cincinnati, where it was brought up by Dr. Richardson, of New Orleans. It was first done there by Dr. Stone, of New Orleans, and is now the operation in that city. It is rapid and certain, and avoids the difficulty that annoys the operator in resection of the rib, of holding the bone steady while he is sawing through the second cut.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

TREATMENT OF DOUBLE PNEUMONIA BY INHALATION OF OXYGEN.

MAY 7, 1883. DR. H. I. BOWDITCH mentioned a case of an old lady with double pneumonia, where both lungs were considerably hepatized, causing great suffering and difficulty of breathing. The trial was made of inhalations of oxygen, with the result of reducing the number of respirations, making them easier, and of changing the livid appearance of the face to a more natural color. The inhalations were continued at intervals for five days, during which time nine of the ordinary iron cylinders of the gas were used. At first it seemed as if the disease might go on to its natural resolution and recovery, but on the fifth day a collapse occurred from which the patient could not rally.

DR. EDES said that some years ago he had treated a child with capillary bronchitis with inhalations of oxygen; the pulse fell and respirations decreased, but the progress of the disease was not affected, and it resulted fatally. He also referred to some cases published by Dr. Smith, of New York, who had used oxygen to some extent in lung cases.

DR. J. S. MIXTER read a paper on

THE USE OF FUSIBLE METAL IN MAKING INJECTIONS FOR CORROSION ANATOMICAL PREPARATIONS.

The methods used by Hyrtl for corrosion preparations do not answer well in our climate as they are apt to melt in our hot summer weather. Henle used metal for casts of the ear, and Sands for those of the urethra, but no use seems to have been made of such metal for the finer injections of the blood-vessels. The compound used is known as Wood's metal, and consists of bismuth, seven parts; lead, four; tin, two; and cadmium, one. This will melt at a temperature of from 140° F. to 160° F. It should be melted under water which has been previously boiled in order to prevent the rapid oxidization which takes place when it is heated in the air. After having heated the organ to be injected to 140° F. the metal is forced in by means of a syringe, and the part left to cool for some time, for

when near the melting point it becomes quite brittle, but when cooler it can be handled quite safely. After having injected and cooled the organ it is immersed in a warm concentrated solution of caustic potash for some two hours, when the tissues become softened, and can be washed away with cold water.

Very beautiful preparations were shown of injections of the vein and artery of a human kidney, of the foetal circulation of a human child at birth injected through the umbilical cord, also preparations of the lungs of a sheep and a cat injected through the trachea, and specimens from the liver and kidney of animals. Dr. Mixer had also made some injections of bone by placing the specimen, immersed in the liquid metal, under the bell of an air-pump; the air was then exhausted, withdrawing the air also from the interior of the bone; on readmitting the air to the bell the metal was forced into the finer bony openings, and a cast was thus obtained. It was often necessary to soak the bone for a week in the strong potash solution or even to use strong sulphuric acid.

DR. WOOD suggested the use of hydrochloric acid before injecting so as to remove the phosphatic portion of the bone, but it was thought by the reader that this might affect the finer membranes lining the bony canals, and interfere with the accuracy of the injection.

DR. HARRINGTON read a paper on

A NEW AND SIMPLE METHOD OF DETERMINING THE PERCENTAGE OF FAT IN MILK.

Several kinds of apparatus were shown, and a brief description was given of the methods commonly used, including Marchand's lactobutrymometer, Chevallier's cremometer, Soxhlet's new areometric process, and the quartz sand method. The attention of the Society was then called to the Feser lactoscope, a small instrument designed to determine rapidly the percentage of fat in milk, and on account of its great simplicity peculiarly adapted for domestic use. The principle of the instrument depends on the fact that the more fat there is in the milk the more opaque the fluid becomes. The instrument consists of a cylinder of glass, into the end of which is fitted a stopper carrying a small rod of white glass on which some black lines are marked. A small quantity of milk (four c. c.) is now poured into the upper end of the cylinder, and water is added in small quantities until the black lines can be seen on the glass rod; the contents of the cylinder are shaken from time to time as the water is added in order to mix it thoroughly with the milk, and when the black lines can be seen the percentage of fat can be read off at once from a scale on the side of the cylinder at the level of the diluted milk. Dr. Harrington stated that he had made a number of comparative tests between this instrument and other methods, and had found that it gave very satisfactory results.

In reply to Dr. Wood the reader said that good milk should have from two and one half to three per cent. of fat. Some analyses of human milk have been recently published in which the results of different observers have been tabulated. From this it appears that the average percentage of fat in human milk is about two and one half per cent., but the analyses vary so much that the results of any one man can hardly be taken as reliable.

DR. HAVEN said that he had used the Feser's instrument at the West End Nursery with very satisfactory results. It shows a very great variation between dif-

ferent cans of milk as supplied by the same milkman, the variation being from two and one fourth to four and one half per cent. of fat, and he had found it much better to have the milkman mix the contents of all the cans together before bringing it to the city rather than to try to get the supply from any one cow, for in this way the percentage of fat would be the same in the milk supplied to all the children, and much more accurate observations could be made on the comparative results of feeding than where the variation between the milk for the different children was so great as under the plan of separate cans. Where the percentage is reduced below the normal it is likely to be a source of inanition, but where the fat is unduly increased it gives rise to intestinal trouble on account of a lack of a proper amount of pancreatic juice to properly digest it. It was not thought that the coloring matters used to doctor milk would interfere with the use of this instrument, for although they might affect the color of the milk they would not change its opacity to any very great extent.

Recent Literature.

A Treatise on Insanity in its Medical Relations. By WILLIAM A. HAMMOND, M. D. Published by D. Appleton & Co.

The most valuable portion of this book is the first third, in which the author considers the general principles of the physiology and pathology of the human mind, instinct, and sleep. His estimate of the importance of psychical peculiarities, which non-experts are apt to regard lightly, is none too high, as a correct appreciation and understanding of these minor morbid changes is likely to open the most hopeful field to physicians treating mental diseases. For such appreciation should lead not only to hygienic and medical care, but to an intelligent adaptation of education and occupation to the individual, so that they shall assist in establishing and preserving mental integrity, where instability has been inherited or acquired, instead of taking away the small chance left, as they are likely to do when not so adapted. Mental peculiarities are now about the only evidences of weakness that fail to receive sympathy from the strong, and their unfortunate possessor is apt to be made the butt of ridicule and goaded to educational training or occupation, for him most ill-advised, until the brain completely gives way, and he is branded lunatic, and despaired of. It is to be regretted that the author, though making these chapters of his book curious and interesting by the recital of cases observed by himself and quoted, fails to offer many practical suggestions in the way of treatment.

In the remainder of the book, devoted to the consideration of insanity proper, the clinical description is graphic and usually good. We have become accustomed to expect a new classification from every writer upon insanity, and, as all classifications must be unsatisfactory with our present knowledge, it is hardly worth while to criticise severely any particular one. Perhaps the chief objection to this one rests in the fact that it is another; though as one variety, he describes "perceptual insanities," "which constitute the primary form of mental aberration, and of themselves are not of such a character as to lessen the responsibility of the individual or to warrant any interference with

his rights. They consist entirely of false perceptions; and if the intellect should be for a moment deceived, the error is immediately corrected." The author's own definition would hardly include this as a form of insanity, and it is rather difficult to understand how illusions or hallucinations of the senses, whether centric or peripheral in origin, can be considered evidences of insanity when they are recognized as unreal, and do not become a basis of action.

In the closing chapter, on treatment, a strong dislike to hospitals for the insane, particularly those in this country, is manifested, and the observations concerning them here, as elsewhere in the volume, are often decidedly lacking in discrimination and candor. Thus, when he says "the number of acts of violence committed in public asylums during the last five years is manifold greater than that perpetrated by all the lunatics whose condition has been recognized, and who have been under the care of their friends or in some private institution for the insane," he simply makes a guess, which is probably the reverse of the truth, and which, if correct, would have no force as an argument, because in this country and abroad a very small proportion of patients who are decidedly dangerous to themselves or others are under the care of their friends or in private institutions, as the proprietors of these institutions, finding the risks and annoyances connected with the treatment of such cases greater than the advantages, usually refuse them admission, while relatives do not consider them suitable to home treatment. The comparison would thus be between a class composed almost entirely of what are often termed harmless lunatics and a class including nearly all the dangerous ones that are under treatment at all.

It also seems to us that the doctor isolates and groups the undesirable features connected with hospital treatment in a way which gives a wrong impression, and he leaves it to be inferred that these troubles can be avoided by keeping the patient out of a hospital, whereas most deplorable results of the kind mentioned often follow the home care of the insane when made without systematic expert selection and supervision. The expense of this supervision, medical and other, makes it unattainable to more than nine tenths of the insane; and the young practitioner will find little of the practical instruction in this work which will enable him to meet intelligently the emergencies that are likely to arise in the case of acute insanity which the author has advised him to keep at home.

Medical Essays. 1842-1882. By OLIVER WENDELL HOLMES. Boston: Houghton, Mifflin & Company; The Riverside Press, Cambridge. 1883.

We welcome with pleasure these old friends in their new garb. In turning the pages that contain, among other papers, these addresses of Dr. Holmes, to which students and practitioners have so eagerly listened, we realize that each address must have formed a sort of epoch in some life, as it marked the entrance upon medical study or the attainment of that period when the student was deemed sufficiently advanced to pursue his studies in his own field without the interference of professors and teachers. It is with peculiar pleasure that we turn back to that lecture which served, in that graceful manner now abandoned, as an introduction to our own entrance upon professional labor. It

is almost humiliating to see how many of our pet ideas and maxims are contained in that single address. Can it be that the ideas of that opening lecture so impressed us that what we have fondly called our *ego* is after all but the echo of Dr. Holmes?

It was certainly good fortune to fall in that early day under the influence of so wise and genial a teacher.

These essays have helped all of us who came under their influence to appreciate the fallibility of human testimony and to deliver us from the "dead hand of medical tradition."

We remember well enough that not all the author's words were received with smiles from all quarters, as he told us of some of our own follies and consigned the majority of drugs to the fishes.

We trust the intelligent young gentlemen of the present day who, passing an entrance examination, need no other welcome to their studies, and who go their way into the world without a formal "God-speed," will add to their many acquirements a knowledge of the good things their elder brothers have learned from Dr. Holmes.

Brain-Rest. By J. LEONARD CORNING, M. D. New York: G. P. Putnam's Sons. 1883. 103 pages.

Perhaps the danger of overtaxing the brain cannot be too strongly insisted upon, and it may be well to publish many brochures thereon. This little treatise is scarcely deserving of book form; nearly all that is said in it has been frequently repeated. Some of the statements might be questioned, but on the whole there is much that is good. The chief object of the author seems to be to introduce a new method of treatment,—the mechanical regulation of the cerebral circulation by compressing the carotids. The author has invented instruments by means of which pressure upon the carotids can be maintained for any time desired. It might be questioned whether other parts would not be also affected. Never having tried his plan we do not feel justified in expressing a positive opinion, but the usefulness of this method seems to us very doubtful.

Insanity: Its Causes and Prevention. By HENRY PUTNAM STEARNS, M. D. Published by G. P. Putnam's Sons, New York.

This book presents a sociological study of the causation and prevention of insanity, which cannot fail to prove of much value to the general practitioner, as well as to the intelligent layman and educator to whom it is chiefly addressed.

In the preliminary chapter the author recites some of the improvements which have taken place in hospitals for the insane of late years, and claims that they now deserve and receive much more public confidence than formerly. He also makes the statement, with less qualification than seems to us desirable, that the "atmosphere of home and the care of friends are unfavorable conditions" in the treatment of the insane.

In considering the question of increase of insanity, he has very properly made no attempt to gain anything from the unreliable records of past years in the United States, but has taken the ratio of persons recognized to be insane to the whole population in Great

Britain for two decades following 1859, and finds it an almost continually increasing one. In England in 1859 one person in 535 was insane, and in 1878 one in 362. In Scotland in 1860 one person in 487 was insane, and in 1879 one in 392. The author concludes that these statistics show, when due allowance has been made for inaccuracies, that there is a large increase of insanity both absolutely and relatively to the population in both England and Scotland, and thinks that the reports of the recent United States census point to the same conclusion for this country.

The belief expressed that emigrants present a high average of mental health cannot well be proved erroneously by statistics, but we think the observation of those familiar with the emigrants landing in Boston in recent years would indicate otherwise; and the explanation offered that the special prevalence of mental disease among unskilled laborers is largely due to the fact that they have never been subjected to any systematic mental training seems less probable than that it is due to inherent mental weakness which predisposes its victims to insanity as well as renders them incapable of rising above the grade of common laborers. The chapters on the insane diathesis and on education are excellent, and one is inclined to regret that several chapters, containing much advice about drinking, smoking, marrying, and morals, which is all admirable, but either not new or of a kind not likely to be heeded, have increased the size of the volume so that these especially valuable portions may not have as wide a circulation among educators as their merit makes desirable.

Oliver Wendell Holmes, Poet, Litterateur, Scientist.

By WILLIAM SLOANE KENNEDY, author of a *Life of Henry Wadsworth Longfellow*, etc. Boston: S. E. Cassino and Company. 1883. 356 pages.

This is an interesting book, as any book must be that deals with so interesting a subject. It gives the main points in the life of its distinguished subject. To fill out its pages some extraneous matter is introduced. It contains two things of real value,—a bibliography compiled with great care, including contributions to periodical literature, and a collection of brilliant paragraphs and *mots* gathered from fugitive publications.

Chromatoptometrisk Tabel, Chromatoptometrical Table.

Ved DR. OLE B. BULL. Christiania: 1882. New York: Wm. Wood & Co.

Dr. Bull's table is intended to furnish a means for determining the acuteness of the color sense much in the same way as an estimation of the acuteness of vision is made by the use of Snellen's types, and, as in the latter case, the result is to be stated in a fractional form. In the color table, however, the size of the test object and its distance from the patient remains always the same, the determination of the amount of the color sense being made solely from the varying degree of intensity of the colors. Only the principal colors, blue, green, yellow, and red, are employed. Squares of these colors and of gray are arranged on a black background in ten rows, the squares in each row having the same degree of luminosity. In the first row the tints are so faint as to be just distinguishable by a

healthy eye at a distance of one meter, in the other rows they are progressively more intense.

The table has evidently been constructed with great care; it does not seem well adapted to take the place of the worsted tests for physiological color-blindness, nor does this appear to be the object of its author; of how great advantage it may prove to be for estimating the progress or improvement of pathological color defects can only be decided by extended experiment.

Lectures on Cataract: its Causes, Varieties, and Treatment, being Six Lectures delivered at the Westminster Hospital. By GEORGE COWELL, F. R. C. S., etc., etc. London: Macmillan & Co. 1883. 126 pages.

A series of six lectures delivered to the students of the Westminster Hospital, and published at the request of some of the author's old pupils. The subject of the lectures is shown by the title, and they are preceded by an account of the anatomy of the lens taken from Quain's Anatomy. The greater part of the book, four lectures, is given to the discussion of the various operative methods for treatment of cataract. The lectures are rather elementary in character, and contain little of importance not to be found in the better text-books on diseases of the eye.

Type and paper are excellent.

Alcoholic Inebriety from a Medical Stand-point. With Cases from Clinical Records. By JOSEPH PARRISH, M. D. Philadelphia: Published by P. Blakiston, Son & Co.

This book pleads strongly for the recognition of inebriety as a disease in a very large proportion of cases, and is evidently addressed chiefly to lay readers. The style is pleasant, though somewhat diffuse and florid, and many interesting cases are cited, which would, however, have greater interest if the histories were more complete from a medical stand-point.

— It is said that a prominent manufacturer of pepsine has applied to good advantage the well-known physiological fact that the emotions awakened by the contemplation of appetizing food not only cause the saliva to flow—or make the “mouth water”—but they also stimulate a secretion of gastric juice. Taking advantage of this fact, fasting pigs are turned into a pen where a trough filled with hot mush is covered with a wire screen to prevent them from eating it, and thus absorbing the pepsine contained in their peptic glands. They are then in due time killed, and the yield of pepsine is said to be greater than when no such physiological method of procedure is resorted to.

— It was an unfortunate metaphor, that of the London doctor, who, having been sent for by a lady in Chelsea, remarked, on her apologizing for asking him to come such a distance, “Don't speak of it. I happen to have another patient in the neighborhood, and can thus kill two birds with one stone.”

Medical and Surgical Journal.

THURSDAY, AUGUST 9, 1883.

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No. 4 PARK STREET, BOSTON, MASS.

ANNUAL REPORT OF THE BOSTON BOARD OF HEALTH FOR THE YEAR 1882-1883.

THIS eleventh annual report of the Board of Health of the City of Boston states the sanitary condition of the city during the past year to have been "altogether satisfactory," by which we do not infer that further ameliorations are despaired of, but that as much progress has been made in preventing or diminishing causes of sickness and death as could reasonably be expected in one year.

The death-rate is lower than for several years; there has been a considerable decrease in number of deaths from preventable causes; there has been no epidemic; the rate of infant mortality is below the average for the past ten years.

The population, estimated on the basis of assessed polls on males over twenty years of age compared with the past twenty-five years, is placed at 410,376, and the death-rate is 21.91 on this estimated population. The rate of the year 1881 was 22.67; that of 1880 23.52; and the average rate of the past eighteen years was 24.30.

The total number of deaths from zymotic diseases, notwithstanding the increase of population, has been less than during either of the two previous years, and the percentage to the total mortality is the lowest since 1874. In 1880 there were 2321 deaths from zymotics; in 1881 the number was 2423; in 1882 it was 2276. This is a most gratifying exhibit, and speaks well for the comparative sanitary condition of the city. The most fatal of the zymotic diseases is diphtheria, which the Board has made every effort to combat. Its decrease over the two previous years is most marked not only in the number of deaths, but in the percentage of actual deaths to the cases reported. In 1880 the number of deaths from this cause was 588; in 1881 the number was 601; and last year the number was reduced to 458.

There were but eight deaths from small-pox, and twenty-four reported cases, a result extremely creditable to the good judgment of the Board and to the efficiency of its measures, and the more striking when compared with the reports from other cities, New York reporting 259 deaths from this disease; Philadelphia 228; Chicago 1292; Cincinnati 1249; Baltimore 551; New Orleans 268; Pittsburg 300. The freedom of Boston from small-pox, moreover, exemplifies the advantage of giving a board of health ample powers when dealing with such an enemy. Isolation,

thorough vaccination, and careful fumigation of infected premises and clothing are the measures upon which reliance has been placed.

The decrease in the deaths of children under five years of age is considerable when the number of deaths of the past year is compared with the average number of the previous ten years, or with the years 1880 and 1881. In the former year the number of infant deaths was 3349, and in the latter 3314, while in the past year the number was 3151. The percentages of the seven years previous are reported as showing a steady and perceptible decrease.

The report contains some interesting items in regard to the so-called zymotic or infective diseases other than the small-pox. The diseases which the Board has classed as contagious and dangerous to the public health within the meaning of the statute law, and which physicians and householders have been required to report, are small-pox, diphtheria, scarlet, typhus, and typhoid fevers, and measles. Physicians were first required to report cases of scarlet fever in January, 1877, "and at the same time an order was passed forbidding children attending school from any family in which this disease existed. A circular of instructions was also issued and sent to each family where a case was reported. It was thought not to be advisable at that time to interfere beyond these measures with scarlet fever. The record then showed an average of 399 deaths yearly, for the previous ten years, from this disease.

"The number of deaths from scarlet fever each year, for the last ten years, is shown in the following table:—

1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
474	269	534	458	104	68	149	33	35	75

"Reports of cases of diphtheria were called for in December, 1877, and a circular of instructions issued and used as in cases of scarlet fever.

"Soon after the Health Board had prohibited children attending school from families where scarlet fever existed the School Board prohibited the attendance of all children from houses where any infectious disease existed. It therefore became unnecessary for the former to make any further prohibition. Diphtheria has been endemic in the city for many years, has produced a large mortality, and is not generally regarded in the community as a very contagious disease. All cases of contagious disease and their location reported to the Health Board are given to the truant officers for the use of the School Board every day. The number of deaths from diphtheria for the last ten years is given in the following table:—

1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
59	72	420	577	364	448	391	588	601	458

"Typhus fever has rarely occurred in Boston for many years. Reports of this disease were called for in 1877; since then seven cases have been reported in the city, and five in quarantine. Only two deaths have occurred from this disease; those were taken at the same time from the City Hospital to quarantine,

where both father and son died since the date of this report.

"Typhoid fever has prevailed, with some variation from year to year, during the last decade, diminishing gradually in the number of deaths until 1880, when the number began to increase again. The prevalence of the disease in the fall of 1881 caused the Board to call upon the physicians for reports of all cases occurring within the city. An investigation of about 250 cases was made with a view of ascertaining the prevailing cause of the disease; but this was followed with no satisfactory results, except the fact that a large number of the cases were in persons who had just returned from the country."

The number of deaths from typhoid fever in each year for the last decade is given in the following table:—

1878.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882
243	202	227	145	156	120	119	154	207	212

The Board thinks if as effective measures could be taken for isolation and fumigation in the other infective diseases as in small-pox that a much more marked decrease would be observed in their prevalence; in fact, there has been an increase in the prevalence of some of these diseases. The most difficult infective diseases to be brought under the control of a board of health are those which are mildly infective and do not inspire the community with dread. The Boston Board thinks that what is wanted "is sufficient hospital room for the proper care and isolation of every case as soon as the Board of Health shall decide that it cannot be properly isolated at home, and that its condition will permit of removal to hospital without danger to the patient's health. There would be no hardship in thus removing the patient, but in very many instances it would be the means of saving life, and the city would be but doing what is imposed upon her by statute law."

Of the houses in which diphtheria occurred over seventy per cent. were found to be in a defective sanitary condition. A short report by Mr. Ernest W. Bowditch giving the results of an investigation into diphtheria in East Boston with a topographical chart is included in the general report of the Board, and we extract the following: "The data offered are certainly insufficient to draw general conclusions from, but the indications appear to be that when the schools are not in session the disease is not so prevalent; moreover, almost immediately upon the beginning of the long summer vacation there has been, for several years, a very decided drop in the number of cases reported, and the low number appears to continue until the autumn term begins." The schools must undoubtedly be held responsible for much of the spread of all the infective diseases.

In referring to sewerage the report contents itself with expressing the hope that the great system of intercepting sewers now under way will be prosecuted with all possible dispatch, and a confidence that it will bring relief from the present annoyances.

As to the water supply the report says:—

"The new Water Board appear to believe that the citizens who complain of the water are not unreasonable in their complaints, and that it is possible, by diligence and well-directed energy, to improve the condition of our drinking water. This is a long step in advance.

"The two principal things to do, as it seems to us, is to prevent the pollution of the water, and to properly construct and prepare the basins to hold it."

The danger to Boston of an epidemic of typhoid fever in Natick or Ashland is very properly dwelt on.

Want of space precludes our dwelling upon a number of interesting subjects suggested by this report.

BOSTON CITY HOSPITAL; NINETEENTH ANNUAL REPORT.

THE report of this institution for the current year is at hand. The total number of patients treated in the hospital was a little in excess of that for the previous year or two, and the expense also shows a slight increase, being at an average of \$9.80 per week for all the patients treated. While 4702 individuals were received into the house, some 12,000 were treated in the various out-patient departments, to which they made on the average some three and one third visits each. The average period during which the inside patients remained under treatment was 22.20 days each.

Certain facts taken from this report serve to show the function which this hospital fills among our local charities. Of the whole number of patients admitted 666 were cases of accidental injury, 149, being more than thirty-one per cent. of the whole number of deaths, died within forty-eight hours after admission. The general mortality was exactly ten per cent., which is practically what it has been for several years. The nativity of the patients is largely foreign, 1542 having been born in Ireland, against 865 born in Boston, and 301 in the rest of Massachusetts.

The trustees call attention to the need of better accommodation for cases of contagious disease, the beds devoted to that purpose being no more numerous now than they were at the inauguration of the hospital, when the total yearly admissions were not a quarter of what they now are. The reception of various kinds of contagious diseases, and the necessity of isolating the one from the other, makes it impossible to use nearly all the beds in the contagious wards. Thus it often happens that, in isolating rooms with four beds each, eight patients of both sexes may occupy the rooms which could be utilized for thirty-two patients, provided no classification was necessary.

The trustees renew their plea for additional accommodations for the nurses of the training-school, both for the sake of the nurses themselves and in order that the rooms now occupied by them may be made available for general hospital purposes. The city council has failed thus far to make any appropriation for the building asked for.

Additional space is also requested for the various

out-patient services, now numbering eight, which are cramped up in rooms originally designed for only three services.

The document contains a full tabulated list of all the cases of disease treated during the year, interesting as showing the relative proportion of the different maladies that present themselves in a large metropolitan hospital. The staff and officers of the institution are to be congratulated on the completion of a year of faithful and valuable work.

MEDICAL NOTES.

— We learn that Dr. John S. Billings has declined the offer of the professorship of Hygiene in the Johns Hopkins University, recently made him. The reasons which he assigns for doing so are that he cannot give up his position as surgeon in the army and superintendent of the National Medical Library, which he would be obliged to do if he accepted the position in question. He has consented, however, to deliver a course of lectures on Hygiene in the institution during the coming winter.

— Filippo Pacini, doubtless the most eminent physician in Italy, has recently died at the age of seventy-one. He filled successively a number of professorships of Descriptive and Topographical Anatomy, as well as that of Artistic Anatomy in the Academy of Fine Arts at Florence. Histology, however, was the field in which he won his highest fame. He was a voluminous writer on all sorts of medical topics. Among his productions were *Observations and Analytical Experiments on the Movements of the Heart and the Sounds which Proceed from Them*, Pisa, 1837; *On the Inertia of the Diaphragm in Defecation and Parturition and on its Action in Vomiting*, Pisa, 1837; *New Microscopic Researches on the Internal Texture of the Retina*, Bologna, 1845; afterwards reprinted at Freiburg in a German translation in 1847; *On the Electric Organ of the Silurus of the Nile*, Bologna, 1846; *On the Mechanism of the Intercoastal Muscles in Respiration*, Pisa, 1846; *New Microscopic Researches on the Texture of the Bones and Teeth*, Florence, 1851; *On the Electric Organ of the Torpillus, Gymnotus, and other Fishes, on the Electro-Motor Conditions of their Electric Organs and their Respective Comparison with the Thermo-electric and with the Voltaic Pile*, Geneva, 1853; *Microscopic Observations and Pathological Deductions on Asiatic Cholera*, Florence, 1854, republished in a French translation at Brussels in the following year; *On the Nature of Asiatic Cholera and its Comparison with European Cholera, and with other Intestinal Discharges*, Florence, 1866, reprinted in an English translation in 1868; *New Method of Practicing Artificial Respiration on the Asphyxiated*, 1867, reprinted in French and Spanish translations in the years 1871 and 1877 respectively; *On the Osmotic Phenomena and the Functions of Absorption*, 1873; *On the Extra-vascular Part of the Circulation of the Blood*, 1875; *On the Duration of the Possibility of Resuscita-*

tion from Apparent Death in Cholera, with Some Cases Illustrative of the Author's Method of Artificial Respiration, 1877.

— Glanders has broken out in the stables of the Newark and South Orange Horse-Car Line, N. J., and the mayor of Newark has issued an order forbidding the driving of any horses from the infected stables into the city. Four of the animals suffering from the disease were shot on the 2d of August. A horse affected with glanders has also been shot at Paterson, N. J., by order of the health authorities.

— The Madrid *Estafette* states that a Spanish gentleman, Señor Lucas Nequeiras Saez, who emigrated from his native land to America seventy years ago, recently returned to Spain in a steamer of his own, and brought with him the whole of his family, which consists of no fewer than one hundred and ninety-seven souls, sons-in-law and daughters-in-law not included. Señor Saez has been three times married. His first wife had eleven children at seven births, his second had nineteen children at thirteen births, and his third had seven children at six births. The youngest of this family of thirty-seven is aged nineteen; the eldest, who is seventy, has seventeen children, of whom the first-born is forty-seven. Of Señor Saez's twenty-three sons, all of whom are living, thirteen are married, six are unmarried, and four are widowers; and of his surviving daughters nine are married. The granddaughters number thirty-four, and of these twenty-two are married, nine are unmarried, and three are widows; and of the forty-five grandsons twenty-three are married, seventeen are unmarried, and four are widowers. There are also forty-five great-granddaughters and thirty-nine great-grandsons, of whom three are married. Señor Saez has never tasted wine or any alcoholic liquor, and lives chiefly upon a vegetable diet, with but little salt. In spite of his ninety-three years, he is still hale and hearty, and makes a point of walking briskly for at least three hours every day.

— According to *New Remedies* there is a difference in therapeutic effect between jaborandi and its alkaloid. Jaborandi is both a sudorific and saliva-increasing drug; the alkaloid pilocarpine, however, appears to possess the last-named property in much greater proportion, a fact which has been noticed by many careful observers. Probably some of the other principles contained in jaborandi, perhaps *jaborine*, are more energetic in the other direction.

NEW YORK.

— On the 26th of July Dr. F. Langé, one of the visiting surgeons to Bellevue Hospital, performed the rare operation of ligating the common iliac artery, in the amphitheatre of the hospital, with the assistance of Drs. Charles McBurney, Samuel Lewengood, house surgeon, and others, and in the presence of a considerable number of physicians and surgeons. It was undertaken for a large aneurism of the external iliac, and at the end of a week there was a fair prospect of the patient's recovery.

— Some twenty cases of enteric fever, two of them fatal up to date, have occurred at Newburgh on the

Hudson within an area of half a block, the result of drinking the water of a well contaminated with sewage. In several families there have been as many as three cases, and in one instance, four. A short time ago the ordinary city water was temporarily unpalatable, and hence various wells and springs were resorted to. As far as known, all the cases of fever were caused by the water of the one well, which was without odor, clear, and pleasant to the taste.

— At a meeting of the new Aqueduct Commission, held August 8th, Mr. Hubert O. Thompson, Commissioner of Public Works, in accordance with the section of the law requiring his department to furnish plans for the work, submitted the details for an additional water supply to the city, which he said were the result of two and a half years of the best thought and labors of the Public Works Department, aided by the suggestions of the ablest hydraulic engineers of the country. The proposed aqueduct, extending from Quaker Bridge reservoir to the Central Park reservoir, would be $31\frac{8}{100}$ miles in length, which is only $\frac{1}{100}$ of a mile longer than an air line. Of this distance 128,956 feet would be in tunnel (for the most part in rock), 3350 feet in excavation, and 8005 feet on embankments. About eight culverts would be required between the Quaker Bridge dam and the Harlem River, and the latter would be crossed by a tunnel 2320 feet long. The width of the Manhattan valley is 4000 feet, and it is designed to cross it by iron siphons. The proposed aqueduct would be circular in form, twelve feet clear interior diameter, and would have a capacity of delivering about 250,000,000 gallons per day, this being the total constant supply which the Croton watershed can with absolute safety be relied upon to furnish at all times and seasons. The combined capacity of the two aqueducts would, therefore, be 350,000,000 gallons per day. It is believed that the new aqueduct can be made available at the end of three and a half years after the beginning of the work, and that the dam at Quaker Bridge can be completed in probably the same time, though it may possibly require five years. This new dam, if constructed, would probably be the most extensive structure of the kind in the world, and in raising the water in the Croton valley thirty-three feet above its present level would produce a reservoir with a capacity of 30,000,000,000 gallons above the level at which it would be drawn off by the aqueduct. The estimate of the entire cost of the dam, reservoir, and aqueduct is placed at \$14,460,940.

— The cases of contagious diseases reported during the week ending August 4th were as follows: typhus fever, five; typhoid fever, forty-nine; scarlet fever, thirty-five; cerebro-spinal meningitis, four; diphtheria, twenty-three; measles, fifty-two. Four of the cases of typhus fever were discovered in one tenement house on Water Street. Among the deaths reported during the week was that of Christina Manning, an unmarried woman, aged one hundred and two years. She was a native of Ireland, and came to America seventy years ago.

— Another case has been added to the increasing

number of deaths from accidental poisoning by carbolic acid. A lady residing on Columbia Heights, Brooklyn, arose from bed about 6.30 A. M. on the 6th of August, and, going to a closet, drank a wine glass full of a solution of carbolic acid (the strength of which is not stated) in mistake for some other medicine which she was in the habit of taking. At once discovering her mistake, she hurried to a neighboring drug-store, where an emetic was promptly given her. Medical aid was also immediately summoned, but she died in great agony at 8.30 A. M.

— On the 1st of August the number of inmates in some of the institutions under the charge of the Commissioners of Public Charities and Corrections was as follows:—

	Inma- August 1, 1883.	Treated during the Year.
Bellevue Hospital	550	10,200
Reception Hospital, Ninety-Ninth Street	15	642
Homoeopathic Hospital, Ward's Isl- and	380	5,221
Charity Hospital, Blackwell's Island	1,015	7,045
Infants' Hospital, Randall's Island	157	1,017
Children's Hospital, Randall's Island	264	877
Idiot Asylum, Randall's Island	208	287
Adult Hospital, Randall's Island	112	567
Branch of New York City Asylum for Insane, Randall's Island	126	185
New York City Asylum for Insane (Female), Blackwell's Island	1,610	1,904
New York City Asylum for Insane (Male), Ward's Island	1,846	2,080
Branch Lunatic Asylum, Hart's Isl- and	230	434

— Veterinary Inspector McLean, of Brooklyn, in a report to Health Commissioner Raymond, states that an inspection of the cow stables of Brooklyn confirms the reports of the existence to an alarming extent of contagious pleuro-pneumonia among the milch cows of that city. He reports that eight per cent. of the entire milk-producing stock of Brooklyn is affected with the disease, and that he finds no evidence that the recent action of the State Board of Health in ordering the slaughter of the diseased animals has in any way mitigated or curtailed its prevalence. He has inoculated a large number of cows as a preventive measure, and this, he believes, is the only method by which it can be stamped out.

— Dr. George H. Fox and several other New York physicians interested in diseases of the skin have recently returned from New Brunswick, where they have been making a careful study of the cases of leprosy in the Tracadia Lazaretto. These are now twenty-four in number, although five years ago there were thirty-six.

— A negress accompanied by her husband recently came into the Jefferson Market police court and complained to the justice presiding that she had been bewitched by two white men, who came to her house and sprinkled a mysterious powder about the premises, in consequence of which she suffered great pain and was tormented by snakes and vermin. She stated that she had previously been made to suffer in a similar way by a colored man with an "evil eye"; but that she had succeeded in procuring a "fet sh," which had effectually released her from his diabolical spells.

The fetish, however, had proved entirely unavailing in the case of her white tormentors. It proved on examination that the latter were nothing more or less than members of the disinfecting corps of the Board of Health.

Correspondence.

LETTER FROM LIVERPOOL.

THE BRITISH MEDICAL ASSOCIATION.

LIVERPOOL, August 4, 1883.

MR. EDITOR,—The British Medical Association is so well known in New England that a few rambling notes on the annual meeting, which has just been held in this city, may be acceptable to your readers.

The session opened on July 31st, with an attendance of about six hundred members, an attendance not larger, you will notice, than is usually present at the annual meetings of the Massachusetts Medical Society, although the membership of this Association exceeds ten thousand (10,000). The general meetings, as well as the meetings of the ten sections, were held in the Medical College building on Shaw Street, in which were also a post-office, telegraph and telephone offices, lunch room, waiting and writing rooms, besides the usual exhibits of surgical instruments and appliances, drugs, dressings, etc., etc. Bigelow's latest lithotrite and evacuator were noticeable; celluloid catheters and "Gamgee's tissue," which is simply absorbent cotton between layers of gauze, were about the only new features to me. The arrangements were in the hands of committees on reception, excursions, local entertainments, soirée, dinner, printing, museum, etc., and their duties were well carried out.

The general meeting on the second day was opened by Mr. Reginald Harrison, who gave a very interesting address touching the more modern improvements in the surgical treatment of diseases of the urinary organs. The work done by Bigelow, Otis, Gouley, and other American surgeons was fully acknowledged and cordially applauded. Mr. Harrison considers the Bigelow operation a great step in advance in the removal of vesical calculus, but does not think it adapted to all cases. Although he did not specify the class of cases not thought suitable for this method, it is fair to presume that he would include cases of stone in young children, and also very large and hard calculi in which the small calibre of the urethra in the one case, and the long time required for crushing and evacuating the fragments in the other, might be considered good reasons for resorting to some other method. So far as I know neither of these points have yet been decided by the crucial test of experience. Mulberry calculi, an inch or a little over in diameter, have been successfully removed by this method. Larger calculi of this species are rare. There can be little doubt in the minds of practical surgeons, who have had any experience with Bigelow's method, that it is the best one yet discovered for the removal of all ordinary vesical calculi in the adult.

In one instance Mr. Harrison cut down upon, and removed a large portion of a cancerous prostate with very satisfactory results. At the end of eight months the man was comfortable, and, although there was a

fistulous opening remaining, yet he was much benefited by the operation. Mr. Bickersteth and Dr. Ashurst, of Philadelphia, have performed the operation with fair results. Mr. Harrison is a firm believer in the personal use of the soft rubber catheter of Mr. Jonathan Hutchinson, in the early stage of prostatic enlargement, even before there is really any obstruction. To establish a free evacuation of urine in advanced cases of prostatic obstruction he advocates the operation of puncturing the bladder through the membranous urethra and prostate, and fastening in a tube or canula. Nothing indicates the advance in the treatment of stricture of the urethra more clearly than the comparative infrequency of the old-time, impermeable strictures, which are never seen at the present day by many surgeons of extensive experience.

The meeting of the Surgical Section was opened by Mr. Rushton Parker, who read a paper on Intestinal Obstruction, which gave rise to quite an interesting debate. Dr. Edward Waters reported a case of a large abdominal tumor accompanied by constipation, pain, constitutional disturbances, finally ending in collapse. Sir Spencer Wells opened the abdominal cavity, found the cæcum, ascending and transverse colon enormously distended with feces, made an artificial anus, and the patient recovered. In commenting on this case Mr. Wells said that it was very obscure throughout, and to this day he does not know the nature of the obstruction.

Mr. Wells has opened the abdomen thirty-four times for intestinal obstruction. The results have been so satisfactory, notwithstanding a large mortality, that he has no hesitation in recommending the operation. His favorite place for opening the bowel is in the right loin, well back toward the spine, between the crest of the ileum and last rib. He claims that the gut is more easily reached in that side, and that there is less danger of wounding the peritoneum, although he does not think the risk to the patient is much increased by that mishap, relating a case in which he accidentally opened the peritoneal cavity, but the patient recovered. Mr. Wells's remarks were brief, yet one could not but feel that they came from a master mind.

Mr. Lawson Tait struck a responsive chord in his audience by saying that an exact diagnosis in cases of acute intestinal obstruction is never made until the abdomen has been opened; and furthermore, that in a majority of cases the cause of the trouble is not apparent even then, nor is it advisable to search for it too curiously, as by establishing an artificial anus, at the most convenient point, you will always relieve, and generally cure, the patient! He has opened the abdominal cavity between seven and eight hundred times in all, and always on the median line in the cases under consideration. He also strongly advocated laparotomy as a remedial measure in peritonitis, having performed the operation twenty times with good results. He washes out the cavity of the peritoneum, inserts a drainage tube, and treats the case as one of ordinary suppuration. Mr. Tait evidently has great faith in abdominal section; more than most surgeons of even the most advanced school.

Mr. Oliver Pemberton, on the other hand, does not think it justifiable to open the peritoneal cavity in these obscure cases for the purpose of finding out what is the matter; and when an operation is necessary, he prefers the right groin to any other location in which to make an artificial anus.

Mr. J. H. Morgan referred to a few cases in which

¹ See this journal, August 2d, page 117.

considerable portions of the intestine had been removed with success. His own cases, few in number, requiring operation, were fatal. In one or two cases of obstruction from bands, he had noticed at the autopsy that the bands were ulcerating, which indicated that Nature was trying to correct the abnormal condition, and might have been successful had the vital powers not become exhausted.

Mr. Christopher Heath read a paper on the Primary Treatment of Fractures by the Plaster-of-Paris Bandage the use of which he strongly recommended in fractures of the lower extremity, but not in the upper. In Colles' fracture he considered Carr's splint the best in use. The sooner the plaster bandage is applied the better, as it serves to prevent swelling and pain. In cases of fractured patella with effusion he aspirates the joint and applies the plaster case over cotton. Fracture of olecranon is to be treated by flexing the arm to a right angle; a method which gave a good result in the only instance in which I have used it.

Mr. Stokes thinks that the less done in fractures of the patella the better, and that paraffine is as good as gypsum with which to stiffen bandages.

Mr. John Croft applies his favorite leg bandage, which is simply side splints made by wetting thick blanket cloth in plaster and binding it upon the leg.

The writer could not resist the temptation to describe the method of treating ordinary fractures of the leg, which is so popular at the Boston City Hospital, by means of the "Plaster Posterior," a method not alluded to by any of the other speakers.

An interesting article was read by Dr. John Fagan on Rapid Effusion of Blood into the Knee-joint Immediately after an Injury. He cited fourteen cases in which by aspiration, once or twice repeated, and followed by bandage pressure, he had obtained a cure in about three weeks in every case. Blood or serum was usually found in the joint. GEO. W. GAY, M. D.

"IMMEDIATE AND FORCIBLE REMOVAL OF THE PLACENTA AFTER ABORTIONS."

MR. EDITOR,—In your issue of August 2d I observe a note referring to my "advocacy of the immediate and forcible removal of the placenta after abortions," and to the exactly opposite recommendation of Dr. Hiram Von Liveringen, of Fort Wayne, Ind., who, in a recent article, "cautions us to let the placenta alone after abortion." I had read this article, but had not thought it worth my while to refute its author's criticism of my active treatment of retained placenta after abortion, because his criticism was based solely on an apparently willful misinterpretation of the word "forcible" used by me in my paper. But when a journal of the standing which yours occupies quotes my words with apparently the same meaning I deem it my duty to myself as well as to the method I advocate to say that the word "forcible" used by me in speaking of the removal of the secundines after abortion by the fingers or instruments does not mean *violent*. *Well directed and controlled, intelligent force* is quite a different thing from brutal, ill-applied force or violence. The force used in extracting a fetal head by obstetric forceps is certainly great, often apparently excessive, and still if well directed and carefully applied does no harm to mother or child. It is only the

excess of force badly managed which harms, and "it was in this sense that I used the word "forcible" in my article. I say expressly, in italics, "*. . . the secundines should be at once removed after expulsion of the fetus in every case of abortion in which such removal can be accomplished without force sufficient to injure the woman.*" And again, "force should be absolutely avoided" during the operation with the fingers and curette.

Surely, Mr. Editor, such language is sufficiently plain, and the advocacy of unlimited force in this operation cannot be charged against me. I cannot help thinking that much of the eloquence with which my critic depicts the evils of "force" [*sic*], and the benefit of "let alone" treatment in this class of cases, was wasted and uncalled for.

Yours truly, PAUL F. MUNDÉ.
20 WEST FORTY-FIFTH STREET, NEW YORK, }
August 8, 1883.

Miscellany.

THE RESPONSIBILITY OF ACCOUCHEURS AFTER INFECTIOUS EXPOSURE.

THE *Edinburgh Medical Journal* (July, 1883) groups together a series of communications recently made to the *Centralblatt für Gynäkologie* on the subject of the duty of a practitioner with regard to attending labor cases after exposure to septic materials. Dr. V. Swieicki introduces the discussion. He refers to the divergence of opinions on this point entertained by various authors, such as Winckel, who recommends exclusion for a fortnight, Zweifel, who recommends it for a week, Schröder, for two days, Martin for twenty-four hours, and Küstner, Ahlfeld, Macdonald, and others, who insist upon thorough disinfection of hands, finger-nails, clothing, and body of the physician or nurse to be all that is necessary, time being a matter of subordinate importance provided the disinfection is complete. Volkmann's opinion is also referred to as belonging to the latter class. The author, as a contribution to our knowledge of this subject, records the case of a medical student at Erlangen who examined a midwifery case six days after having opened a thorax, and who had, according to his own account, every day washed with carbolic water in the strictest manner. Before allowing him to examine, the author asked and obtained Professor Zweifel's permission for so doing. The patient, a iii.-para, had an easy labor, but was subsequently seized with diffuse peritonitis associated with right-sided parametritis, and passed through a well-pronounced attack of puerperal fever, being only able to leave her bed at the expiration of four weeks. The child also was infected, gradually lost weight, and died on the twelfth day. The sectio proved the septic nature of the affection. It has, however, to be noted that, besides the student, the author, a practitioner, and the chief midwife examined the patient. The author says that the practitioner had made no post-mortem examination recently, and that both he and the chief midwife on the same day examined another lying-in woman, as well as other puerperal patients, whose convalescence was normal. Relying on this case, the author thinks that abstinence from midwifery practice after making a post-mortem examination, or after a case of puerperal fever, is advisable.

Löhlein, contributing to the discussion in the same

periodical, believes that the physician, if he understands the principles of antiseptics, may so disinfect himself after contact with a dead body or a suspicious lying-in case that he may safely continue his midwifery practice. He cites his own experience during the last four years, during which he examined and treated in consultation numerous patients suffering from putrid abscesses, puerperal fever, etc., and attended meanwhile two hundred and ten midwifery cases in his own practice without any casualty from puerperal sepsis, and with only very occasional high temperatures. This immunity he traces to the thoroughness with which he disinfected the hands, using soap, nail-brushes, and five per cent. carbolic lotion. The chief point, he maintains, is not what is used, but how the application is made. He followed the principle of performing thrice the act of disinfection,—first, at the patient's house; second, at home, to which he hurried as soon as possible, in order that he might change his clothing and linen; and, third, before making another vaginal examination.

Dr. Fritsch gives his experience, stating that since 1872 he has never lost a puerperal patient, and has had only one serious lying-in case (parametritis), although he had conducted many severe deliveries, and had followed other practice almost uninterruptedly. In 1873 he treated a brother suffering from putrid pelvic abscess, and had to dress the wound daily. After every dressing he washed himself with a six per cent. carbolic solution. During this time he conducted two hundred and forty midwifery operations, and for the first time in the history of the Poliklinik of Hallé there was an entire year without a single death. The author argues that this was no mere chance, but the result of the adoption of thorough and intelligent antiseptic precautions.

Dr. Wiener, of Breslau, also contributes to the symposium. This author states that in the midwifery clinique from autumn, 1880, to Easter, 1882, during which time Spiegelberg, and, after his death, the author, had charge of it, emboldened by Volkmann's and Ahlfeld's example, students who had to do with infectious materials, such as cadaveric poison, etc., were permitted to undertake deliveries, Spiegelberg and himself proceeding on the principle that if antiseptics actually presented a reliable protection against infection it must do so in all cases and under all conditions. In the time mentioned there died twelve out of four hundred and seventy-one puerperal women; of these twelve, seven must at once be subtracted, in so far as one was brought into the clinique already intensely infected; another had uterine rupture, with the child escaped into the abdomen; two had stinking carcinoma of the vaginal portion; two had suffered severe injury during delivery, partially owing to instrumental assistance; and one had succumbed to hæmorrhage. There remained, accordingly, five fatal cases, equal to 1.06 per cent. of the deliveries, which, without the coöperation of other factors, were caused directly by infection. Of these five deliveries it is further to be observed that one woman had been examined outside the clinique by a female not a midwife; two were used for examination purposes. The writer points out especially that a large portion of the few fatal cases in these public clinics are the examination cases, where many students examine, and where by reason of some interesting peculiarity they are anxious to make out the condition accurately, really thereby using the finger more than is necessary. If

all who had touched a cadaver or cared for a case of puerperal fever were to exclude themselves from midwifery practice for a long time, they should, in consistency, do the same on every occasion of touching infectious materials, whether a putrid carcinoma or the pus from an opened abscess. That such exclusion would lead to intolerable difficulties is plain. But these difficulties must doubtless be reckoned with if the view is really correct that every one that has to do with decidedly infectious materials cannot disinfect himself completely in quite a short period. But this view is not supported by the experience of the clinique in Breslau or of many surgical institutions. The author believes that it is only necessary that the operator, be he surgeon or obstetrician, possess the necessary familiarity and acquaintance with antiseptic details and is convinced of their value. One must, as Volkmann points out, in any case in which he has to deal with infectious materials, *immediately* undertake a thorough washing with soap and nail-brushes, in a strong—that is, about five per cent.—carbolic lotion (any weaker one is inadequate), and especially must observe careful cleansing of the roots of and parts under the nails, so as to prevent in this way putrid materials from drying in or being imbibed into the deeper layers of the epithelium.

ON THE BEHAVIOR OF THE UTERUS IN PUERPERAL ECLAMPSIA AS OBSERVED IN TWO CASES.

DR. BRAXTON HICKS, in a paper read before the Obstetrical Society of London, reported in the *American Journal of Obstetrics* (July, 1883), remarked that the condition of the pregnant uterus during a series of epileptiform attacks had not been very closely observed, the general idea being that the uterus participated in the general excitement of the muscular system. Passages were quoted from different works on the subject in illustration of this. The author then described two cases in which he had carefully noticed the action of the uterus. In each of them, coincidently with a convulsion, a powerful and prolonged contraction of the uterus was observed. Between the convulsions the uterine action was natural. He could not state the exact relationship in point of time between the convulsions and uterine contraction. He did not think that uterine contraction alone caused the convulsion; for in the most severe cases of tonic or clonic contraction of the uterus convulsions did not occur. But there might in these cases be increased excitability. It had been suggested that increased force of pains might result from carbonic acid intoxication due to the convulsions. He thought the immediate supervention of uterine contraction on the convulsive paroxysms and the quietness of uterine action between them told against this view. The presence of these contractions, together with the disturbance of the heart and vascular system and the pupil, showed that the muscles of organic life were liberally affected during the paroxysms of eclampsia. These prolonged and powerful uterine contractions, as well as the carbonic acid poisoning of the mother's blood, were a source of danger to the fœtus, and, in its interest, speedy delivery was called for, if it could be effected without harm to the mother.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 4, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	711	347	38.52	12.23	28.40	1.27	2.94
Philadelphia.....	846,984	313	195	41.15	15.95	25.52	3.19	4.79
Brooklyn.....	566,689	—	—	—	—	—	—	—
Chicago.....	503,304	334	215	44.08	3.48	33.35	3.77	2.90
Boston.....	362,535	236	129	39.24	15.08	32.99	1.79	2.96
St. Louis.....	350,522	171	94	35.61	8.76	23.36	1.17	4.67
Baltimore.....	332,190	196	108	50.00	12.75	29.58	4.08	5.61
Cincinnati.....	255,708	117	45	21.37	17.09	12.82	5.98	—
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	83	45	39.76	14.45	26.51	4.82	—
Pittsburg.....(1883)	175,000	60	35	38.33	8.33	24.93	6.66	1.66
Buffalo.....	155,137	125	79	58.40	4.80	50.40	2.40	—
Milwaukee.....	115,578	67	49	25.16	5.92	22.20	—	1.48
Providence.....(1883)	116,755	50	26	50.00	10.00	48.00	2.00	—
New Haven.....(1883)	73,000	27	18	44.44	7.41	25.92	7.41	—
Charleston.....	49,999	46	22	19.53	15.19	13.02	—	4.34
Nashville.....	43,461	28	7	32.13	21.42	25.00	7.14	—
Lowell.....	59,485	27	9	25.90	29.60	22.20	3.70	—
Worcester.....	58,295	31	19	48.30	9.66	41.86	—	—
Cambridge.....	52,740	37	25	59.44	13.51	40.53	—	13.51
Fall River.....	49,006	28	18	64.26	3.57	60.69	—	3.57
Lawrence.....	39,178	12	7	41.66	16.66	41.66	—	—
Lynn.....	38,284	23	9	25.08	25.08	17.39	4.35	—
Springfield.....	33,340	19	8	52.63	10.52	41.08	—	—
Salem.....	27,598	11	3	9.09	18.18	9.09	—	—
New Bedford.....	26,875	18	8	38.88	11.11	38.88	—	—
Somerville.....	24,985	19	8	21.04	10.53	15.78	5.26	—
Holyoke.....	21,851	13	9	53.84	7.69	30.77	—	15.38
Chelsea.....	21,785	13	3	15.38	24.07	15.38	—	—
Taunton.....	21,213	8	1	12.50	—	12.50	—	—
Gloucester.....	19,329	3	1	—	—	—	—	—
Haverhill.....	18,475	9	4	33.33	—	33.33	—	—
Newton.....	16,995	2	2	50.00	—	50.00	—	—
Brockton.....	13,608	8	5	50.00	—	50.00	—	—
Newburyport.....	13,537	5	1	20.00	—	—	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	2	1	50.00	—	50.00	—	—
Twenty Massachusetts towns.....	162,963	84	27	25.00	16.67	20.25	1.19	—

Deaths reported 2946 (no reports from Brooklyn and New Orleans): under five years of age, 1582: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 1151, diarrhoeal diseases 859, consumption 351, lung diseases 99, diphtheria and croup 84, typhoid fever 73, scarlet fever 31, malarial fevers 30, measles 24, whooping-cough 21, cerebro-spinal meningitis 18, puerperal fever five, erysipelas three, typhus fever two, small-pox one. From scarlet fever, Philadelphia seven, Chicago six, Baltimore five, Buffalo three, Boston and St. Louis two each, New York, District of Columbia, Pittsburg, Milwaukee, New Haven, and Holyoke one each. From malarial fevers, New York 13, St. Louis five, Philadelphia four, Chicago three, New Haven two, Charleston, Springfield, and Westborough one each. From measles, New York 12, Baltimore five, District of Columbia three, St. Louis two, Worcester and Cambridge one each. From whooping-cough, New York nine, Chicago and District of Columbia three each, Pittsburg two, Philadelphia, Boston, Baltimore, and Cincinnati one each. From cerebro-spinal meningitis, New York five, Buffalo three, Cincinnati two, Chicago, St. Louis, Worcester, Lynn, Springfield, Holyoke, Newburyport, and Northampton one each. From puerperal fever, Chicago, Boston, St. Louis, and Buffalo one each. From erysipelas, New York, Philadelphia, and Cambridge one each. From typhus fever, New York and Philadelphia one each. From small-pox, St. Louis one.

Nine cases of small-pox were reported in St. Louis, Buffalo three; typhoid fever 30, scarlet fever 21, diphtheria 20, and measles three in Boston; scarlet fever seven, diphtheria six in Milwaukee.

In 38 cities and towns of Massachusetts, with an estimated population of 1,152,391 (estimated population of the State

1,922,530), the total death-rate for the week was 26.53 against 28.43 and 22.22 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending July 21st, the death-rate was 21.3. Deaths reported 3523: acute diseases of the respiratory organs (London) 179, diarrhoea 491, measles 119, scarlet fever 84, whooping-cough 54, fever 32, diphtheria 29, small-pox (Birmingham three, Newcastle one) four. The death-rates ranged from 12.7 in Brighton to 29.7 in Newcastle-on-Tyne; Bradford 13.2; Bristol 16.9; Leeds 19.3; Birmingham 19.6; Leicester 19.7; Liverpool 22.6; Sheffield 23.1; London 23.5; Manchester 24.9. In Edinburgh 19; Glasgow 25.3; Dublin 22.7.

For the week ending July 14th, in 172 German cities and towns, with an estimated population of 8,658,348, the death-rate was 37. Deaths reported 6153; under five years of age, 4146; diarrhoeal diseases 740, consumption 490, lung diseases 400, diphtheria and croup 164, measles and rtheln 135, scarlet fever 69, typhoid fever 57, whooping-cough 41, puerperal fever 17, small-pox (Breslau two, Frankfurt a. M., Spandau, and Worms one each) five. The death-rates ranged from 14.9 in Elberfeld to 63.9 in Berlin; Königsberg 25.6; Breslau 43.5; Munich 46.6; Dresden 31.9; Leipzig 36.7; Hamburg 31.5; Cologne 46.5; Frankfurt a. M. 23.9; Strasburg 33.

For the week ending July 21st, in the Swiss towns, there were 31 deaths from consumption, diarrhoeal diseases 19, lung diseases 15, measles nine, diphtheria and croup three, whooping-cough three, typhoid fever two, scarlet fever one, erysipelas one. The death-rates were at Geneva 17.4, Zurich 16, Basle 15.9, Berne 20.3.

The meteorological record for the week ending August 4th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date. Jul- August, 1883.	Barom- eter.	Thermom- eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 29	29.835	70	83	64	90	51	68	70	SW	W	W	4	17	9	O	C	C	—	—
Mon., 30	29.912	69	82	57	63	37	58	53	W	W	W	6	12	7	O	C	C	—	—
Tues., 31	29.942	69	81	57	63	38	78	60	W	SW	SW	8	11	7	O	C	C	—	—
Wed., 1	29.948	70	81	59	78	42	90	70	NW	W	SW	7	10	6	C	C	C	—	—
Thurs., 2	29.835	69	83	63	84	71	90	82	S	S	SE	4	16	4	C	C	C	—	—
Fri., 3	29.739	71	82	60	90	47	63	67	N	SW	W	4	12	8	T	O	C	—	—
Sat., 4	29.909	66	74	56	67	43	63	59	W	W	W	12	16	14	C	F	C	—	—
Means, the week.	29.874	69	83	56				66										5.30	.17

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM AUGUST 3, 1883, TO AUGUST 10, 1883.

MAGEUDER, DAVID L., lieutenant-colonel, and surgeon. The leave of absence extended one month. S. O. 89, Military Division of the Missouri, August 4, 1883.

FORWOOD, WILLIAM H., major and surgeon. To proceed to Fort Washakie, Wyoming, and Fort Ellis, Montana, on public business, and return. S. O. 87, Military Division of the Missouri, August 2, 1883.

WOODWARD, JOSEPH J., major and surgeon. Leave of absence granted on account of sickness, by S. O. 34, extended six months. S. O. 179, A. G. O., August 4, 1883.

BYRNE, CHARLES B., captain and assistant surgeon. Relieved from duty at Fort Craig, N. M., and assigned to duty at Fort Lewis, Colorado. Paragraph 3, S. O. 161, Department of the Missouri, August 6, 1883.

LAUDERDALE, JOHN V., captain and assistant surgeon. Granted leave of absence for two months, to take effect on or about the 15th inst. Paragraph 2, S. O. 90, Department of the Missouri, August 6, 1883.

OWEN, W. O., JR., first lieutenant and assistant surgeon. To proceed from Vancouver Barracks to Fort Walla Walla, W. T., and report to the commanding officer of the latter post for temporary duty. S. O. 101, Department of the Columbia, July 27, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING AUGUST 11, 1883.

GATEWOOD, J. D., passed assistant surgeon, orders to the Trenton revoked, and ordered to the Kearsarge.

SCOTT, HORACE B., assistant surgeon, detached from the Receiving Ship Franklin at Norfolk, on the 30th inst., and ordered to the Trenton on September 1st.

AUSTIN, A. A., passed assistant surgeon, detached from the Richmond, and waiting orders.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, APRIL 1, 1883, TO JUNE 30, 1883.

BAILHACHE, P. H., surgeon. To examine officers and cadets of the Revenue Marine Service. April 2, May 28, and June 4, 1883.

To proceed to New York, N. Y., to make arrangements for the care of seamen. April 30, 1883.

To proceed to Chattanooga, Memphis, St. Louis, Cairo, Evansville, Louisville, Cincinnati, Gallipolis, Wheeling, and Pittsburgh, as inspector. June 23, 1883.

MILLER, T. W., surgeon. Detailed as president of Board of Examiners. May 15, 1883.

Detailed as member of Board for the physical examination of cadets of the Revenue Marine Service. May 15, 1883.

WYMAN, WALTER, surgeon. Detailed as member of Boards for the physical examination of officers and cadets of the Revenue Marine Service. May 1, 15, and 28, 1883.

Detailed as member Board of Examiners. May 15, 1883.

MURRAY, R. D., surgeon. To proceed to Pensacola, Fla., and take charge of Quarantine Service. May 21, 1883.

GASSAWAY, J. M., surgeon. Granted leave of absence for ten days. April 21, 1883.

Detailed as recorder, Board of Examiners. May 15, 1883.

SMITH, HENRY, surgeon. Granted leave of absence for thirty days on account of sickness. June 14, 1883.

FISHER, J. C., passed assistant surgeon. Detailed as member of Boards for the physical examination of officers of the Revenue Marine Service. May 1 and June 4, 1883.

COOKE, H. P., passed assistant surgeon. Granted leave of absence for thirty days. May 15, 1883.

O'CONNOR, F. J., assistant surgeon. Relieved from duty at Detroit, Mich., and assigned to temporary duty at Boston, Mass. May 10, 1883.

GUIRERAS, JOHN, assistant surgeon. Granted leave of absence for thirty days, without pay. April 3, 1883.

ARMSTRONG, S. T., assistant surgeon. To proceed to Memphis, Tenn., for temporary duty. May 21, 1883.

BENNETT, P. H., assistant surgeon. Granted leave of absence for thirty days on account of sickness. June 26, 1883.

AMES, R. P. M., assistant surgeon. Granted leave of absence for fourteen days. April 3, 1883.

DEVAN, S. C., assistant surgeon. Detailed as medical officer, Revenue Steamer Corwin during cruise in Alaskan waters. April 16, 1883.

BEVAN, A. D., assistant surgeon. To proceed to Detroit, Mich., for temporary duty. June 11, 1883.

GLENNAN, A. H., assistant surgeon. To proceed to Norfolk, Va., for temporary duty. June 26, 1883.

APPOINTMENTS.

The following candidates, having passed the examination required by the Regulations, were appointed assistant surgeons by the Secretary of the Treasury, June 6, 1883:—

ARTHUR D. BEVAN, M. D., of Illinois, and
ARTHUR H. GLENNAN, M. D., of the District of Columbia.

BOOKS AND PAMPHLETS RECEIVED.—Transactions of the Mississippi State Medical Association at the Sixteenth Annual Session, held at Meridian, April 4-6, 1883, etc. Jackson, Miss. 1883.

A Rectal Obturator. By David Prince, M. D., Jacksonville, Ill. (Reprint.) 1883.

The Bead Suture. A modification of the Quilled Suture for Palatoplasty, etc. By David Prince, M. D., of Jacksonville, Ill. (Reprint.) Brooklyn, N. Y. 1883.

Two Cases of Hysteria: (1) Hysterical Hemi-Anæsthesia in a Man, following Injury; (2) Hysterical Anæsthesia of Special Sense accompanying Cutaneous Hyperæsthesia. By G. L. Walton, M. D. Boston.

Eleventh Annual Report of the Board of Health of the City of Boston for the Financial Year 1882-1883. Boston. 1883.

Lectures.

CLINICAL LECTURE ON ORGANIC DISEASE OF THE HEART.

DELIVERED AT BELLEVUE HOSPITAL, NEW YORK,
MAY 18, 1883.

BY PROF. AUSTIN FLINT, M. D.

GENTLEMEN, — To-day I propose to give you a kind of practical exercise in diseases of the heart, and, bringing before you a number of cases, none of which I have myself examined, endeavor to call to your attention such points in diagnosis and treatment as may arise in connection with them, and which may be of service to you in your study of this important subject. The first patient being now before us, I will proceed at once to make an examination in reference to his heart, without obtaining any history or asking any questions in reference to his present condition. On looking at the man we notice, in the first place, that he has no embarrassment in breathing, and that there is no cyanosis present. In regard to his heart we note that two movements are visible upon the chest-walls, one systolic and the other diastolic. Now let us see whether the heart is enlarged or not. The apex-beat is in the sixth intercostal space, on a vertical line with the nipple, which indicates that while the organ is enlarged, the degree of enlargement is not very great. On auscultation it is found that the first sound of the heart reaches its maximum intensity at this point. The next point is to find out how large a portion of the heart is uncovered with lung tissue. The normal area of cardiac dullness, as you are aware, is of the general shape of a right angled triangle, and here we find that this area of superficial dullness is at least double the normal size. We have thus made out the undoubted existence of a certain amount of enlargement of the heart. Whether this enlargement is due to hypertrophy or to dilatation is a very simple matter to determine. If there is hypertrophy there will be increased impulse, and if dilatation weakened impulse. It is well to remember, however, that the apex beat may be feeble while the impulse above that is quite strong. When this is the case it is due to a change in the shape of the heart, the organ having become more globular in outline. The next point in the differentiation between the two is to find out whether the impulse is of a heaving or sharp character. It is found to be of the latter, which results from dilatation; and we have in this case, therefore, enlargement of the heart with predominant dilatation.

In some cases enlargement of the heart is due to disease of the kidney, in which case the left side of the organ is principally affected, and in others to pulmonary emphysema, where the right side is enlarged. As a general rule, however, this pathological condition is dependent on valvular disease of the heart. There is certainly no emphysema present in this case, and presuming that there is no kidney trouble either, we will look for evidence of disease of the valves; and as the left side of the heart is far more commonly the seat of such affections than the right, we will make our examination of that first. We may have, as you know, either regurgitation or obstruction present, or both combined, and by means of auscultation we can usually

determine what the condition is without difficulty. On applying the stethoscope to the left side of the heart here I get a soft, bellows-like murmur, synchronous with the first sound of the heart, which reaches its maximum intensity at the apex, and which is also transmitted beyond the apex to the left. There is no presystolic murmur noticeable, and we decide, therefore, that there is present in this case a regurgitation from the left ventricle into the left auricle, or mitral regurgitation, as it is called. Auscultation of the aortic valves by placing the stethoscope in the second intercostal space, just to the right of the sternum, shows a negative result. The case, therefore, is a perfectly simple one; the enlargement of the heart depending on mitral insufficiency, which always leads to more or less increase in the size of the right ventricle, as is the case here.

One point of considerable practical interest in such a case as this is to compare the aortic second sound with the pulmonic second sound in order to form some idea of the degree of insufficiency existing. It is known that where there is hypertrophy of the right ventricle the pulmonic second sound is intensified, and in proportion, as a rule, as the second aortic sound is weakened, is the amount of mitral insufficiency present. In the present instance, I may say, there is a condition of affairs which can be tolerated almost indefinitely by the system, and I would warn you in cardiac affections generally not to form too hasty a prognosis of impending serious trouble.

Now, in order to make the case more complete, let us ask a few questions of the patient; but before doing so I will venture to predict with a very considerable degree of confidence that this man has had acute articular rheumatism at some period of his life. Yes, he says that he has had this disease, the first attack fifteen years ago, and the last three years ago. He does not give any history of endocarditis in connection with any of his attacks; but this is a complication which frequently escapes notice altogether. Yet its effects are apt to be of a permanent and serious character, and in this case it has undoubtedly led to the organic disease which is now present. In such a condition of the heart the patient after a time finds that he suffers more or less from shortness of breath in taking exercise which formerly produced no such effect, and that is the chief trouble here. The man says he "gets out of wind," and with this exception he is really quite well. This, then, is a perfectly typical case of simple mitral insufficiency, without mitral obstruction, and without any complicating disease of the aortic valves; typical as regards, first, the physical signs present; second, the connection of the trouble with acute articular rheumatism; and third, the general symptoms.

Finally, let us inquire what are the therapeutical indications in such a case as this? Too many practitioners under these circumstances resort at once to digitalis. Given a case of disease of the heart, and digitalis is prescribed as a matter of course. But in the present instance digitalis is not called for at all. All remedies which cause depression and disturbance of the system are contra-indicated, first, because they would accomplish no good, and, secondly, so far as they had any effect it would be an injurious one. What we have to do here is to see what the man needs to put him in the best general condition possible. It is of the most importance to him to have good, nourishing alimentation, and if his digestion is defective, he should have appropriate remedies to improve it. In

¹ Reported for the Boston Medical and Surgical Journal.

this case there is merely a question of toleration, and as long as the general system is in good condition, the heart is not likely to give rise to trouble. The patient has now been in the hospital a week, and, with the nourishing diet, rest, and freedom from anxiety which he has had here, he has in this short time already improved to a very appreciable extent, as I am given to understand.

As to the matter of dyspnoea it is too much the custom for physicians to tell their patients suffering from cardiac disease that they must be exceedingly careful about taking exercise for fear of evil results, but this kind of advice has a bad effect on such patients. In the first place it keeps their minds continually on the subject of their hearts, which of itself is very injurious, and, secondly, it deprives them of that amount of exercise which is essential to the maintenance of health, and which, indeed, as a rule, they could take perfectly well. The safest plan is to direct such patients to take just as much exercise as they can without inconvenience or discomfort.

In the case of our second patient, whom I now bring before you, we notice on inspection of the chest only one movement instead of two, as in the other, at the apex of the heart, while there is in addition a second movement at the base. The heart is undoubtedly enlarged because the apex beat, as you will observe, is considerably lower down than it ought to be. Unlike the former case it is also found much further to the left than its normal position, a point which leads us to infer the presence of mitral disease. In this respect the first case was an exception to the general rule, the apex beat being carried so little to the left that it would, perhaps, seem to indicate an aortic rather than a mitral affection. On account of the strength of the impulse in the present instance we infer that there is hypertrophy rather than dilatation of the heart.

On auscultation we get a systolic murmur at the apex which differs from that in the other case in being less loud, much lower in pitch, and not of such a marked bellows-like character. Again, however, there is no evidence of any mitral obstruction, but when we apply the stethoscope at the base we get with each systole a loud, rough murmur, which must therefore be a direct aortic murmur. But in addition, instead of the second sound of the heart there is found another rough murmur, so that we have here a systolic and diastolic aortic murmur besides the systolic mitral murmur. The latter is much weaker in tone than the aortic murmurs, but notwithstanding this it is quite possible that the mitral disease may be more serious than the aortic. The practical lesson to be learned from this is that it is never safe to judge of the gravity of disease of the heart from the intensity and quality of the murmurs heard. I find in this case distinct evidence of dilatation of the aorta (though not necessarily in the form of a sacculated aneurism) in addition to the cardiac disease. I would warn you, however, never to form a diagnosis of aortic aneurism from the roughness of murmurs heard at the base.

This patient is only twenty-eight, and therefore not of an age which entitles him to have aneurism, which, as a rule, occurs at a later period of life. I am quite sure, however, that there is dilatation of the aorta here, and when this occurs as early as the age of this man it is almost invariably due to one cause, namely, syphilis. This he denies having had, but as he also says that he has never had acute articular rheumatism I am afraid

we shall have to place the weight of pathological authority against the word of the patient.

On questioning him I find that notwithstanding the fact that he has an enlarged heart, with both mitral and aortic lesions, he is able to work hard, and that he manages to get along very well altogether with the exception of a pain in his side sometimes. His heart is really much larger than that of the other patient, but he suffers less inconvenience because the valvular disease is compensated for by predominant hypertrophy, while in the other case the heart has reached the limit of its growth. In the latter the cardiac walls have become more or less thinned, and the predominant dilatation gives rise to greater weakness and interference with respiration.

Our next patient is a Bohemian, who does not speak any English. On inspection and palpation we get two impulses, and find that the one at the apex is not so strong as a second one that is higher up. The apex being lowered and carried considerably to the left in this case also, we have a sufficient basis to warrant the guess that here again there is a mitral lesion. Auscultation reveals the presence of a loud, high-pitched, bellows-like systolic murmur, and there being no presystolic murmur we form the diagnosis of mitral regurgitation without obstruction, as in the other cases. At the base the only adventitious sound is an indistinct murmur, which is simply a transmission of that heard at its maximum intensity at the apex. We have again, therefore, a case of mitral insufficiency and enlargement of the heart, and as it is the right ventricle that is principally affected in the latter the pulmonic second sound ought to be intensified as compared with the aortic second sound. I find, in fact, that the difference between the two is so great that it convinces me that it depends on weakness of the aortic sound as well as the intensifying of the pulmonic, and therefore we are enabled to form some idea of the amount of regurgitation that is here present.

In the last patient whom we shall have time to examine to-day I find again the apex lowered and carried considerably to the left. There is, then, cardiac enlargement here also, and from the character of the impulse there can be little doubt that there is predominant hypertrophy rather than dilatation. The first sound of the heart also indicates this. In hypertrophy the first sound is loud, long, and booming, while in dilatation it is short, weak, and valvular in character. There is once more a mitral systolic or regurgitant murmur, and no direct mitral murmur indicating obstruction. In this case it is quite a feeble murmur, and, therefore, in marked contrast to that heard in some of the other patients. At the base there is found an aortic direct murmur, loud and rough, and an aortic regurgitant, feeble and soft. In connection with this case I would again impress upon you the caution of not judging of the gravity of cardiac disease from the intensity of the murmurs present. Twenty years ago there was connected with the house-staff of this hospital a young physician who had a well-marked aortic regurgitant murmur, yet ever since then he has continued in the active practice of his profession, and to-day the general state of his health is excellent. If I had time I could tell you of a large number of similar instances. Although this patient has enlargement of the heart, mitral insufficiency, and both aortic insufficiency and obstruction, I will venture to predict that he will do well because his system has already tolerated

this cardiac condition for a considerable time, and the symptoms of the case do not now indicate any immediate serious trouble such as we would apprehend if there were present dyspnoea without taking exercise, cyanosis, and general dropsy.

Original Articles.

GLYKOGEN.¹

BY JOSEPH W. WARREN, M. D.

Of all the bodily organs common to both sexes no one, perhaps, has attracted the attention of the medical profession so constantly and so universally as the liver. Its size and vascularity, no less than its intimate topographical associations with the heart and the digestive tract, were enough to justify the importance attributed to it, and to render reasonable the part it has played in the theory of disease as well as among the mysteries of physiology. One other organ — the uterus — has been a worthy rival in offering an easy explanation of bodily trouble and a much more convenient point of attack, but fortunately somewhat less than half the children born present this ætiological combination. Modern medical work, pushing back gradually but surely the limits of exact knowledge, has robbed the liver of much of its mystery, and brought down such terms as melancholy and biliousness from the curious position they once occupied. We are still far enough from knowing with any exactitude what the liver, or, indeed, almost any organ of the body, really does, but we have taken the first great step, at least, on the road to knowledge; we have found the way to an understanding; we have accepted the experimental method in physiology and pathology, and, thorny as the path is along which this leads us, every sign-post we meet assures us that we are slowly perhaps, but none the less surely, reaching the goal of our desires.

The experimental method calls for the patient, laborious work of many investigators, and their results are not always easily grasped and understood by those who cannot regularly follow them in detail, and much that is done is published in journals or pamphlets not very accessible to the general practitioner. I have ventured, then, to ask your permission to-day to act as a modest filter in presenting, somewhat popularly and as concisely as may be, some of the results of work done by many authors in the past few years, and bearing upon one function of the liver.

I mean its glykogenic function, or, more generally, the present state of our knowledge of glykogen. I fear that what I shall have to say will seem to many of you exceedingly negative, for it tears down some older views and builds up but little. In science we have no dogmas to maintain, and we are true to a theory or a hypothesis only so long as the facts bear it up. Like the mountain climber, we must often descend to get a new line of advance when the old one has led us on as far as it may. It is the tyro who sticks to the bee-line and sneers at chasm and crevasse.

We are so accustomed nowadays to think of glykogen that it is well, perhaps, to be reminded that the recognition of it is really of very recent date. There are members enough of this Society, still hale and

hearty and in busy practice, who never heard or dreamt of any such substance until they had been in active work for years. It is, indeed, not quite thirty years since the discovery was made that the liver contained a starch-like body which, under certain conditions, could be changed into sugar. This discovery is associated with the name of the great Frenchman, Claude Bernard, although Hensen, a German, seems to have made the discovery independently at about the same time. Not long before Bernard had found sugar in the liver, and had described its production as a new hepatic activity, so that when yet another new liver substance was found capable of easy transformation into sugar the name of sugar-former, or glykogen, was naturally suggested.

Circumstances have combined to attract much attention to its study, the hope of finding the solution of the pathological problem associated with diabetes being, perhaps, the most prominent in the mind of the practitioner.

Physiologists have long recognized that the glykogen problem has far more importance than an explanation of such a disease as diabetes mellitus can be, that it promises to open the way to a clearer insight into the grand secret of nutrition itself. In the light of some of the newer work in this direction the way promises to become clearer, but our light is yet but as the poor tallow dip of our ancestors in comparison with the electric light we hope to have. The whole problem of nutrition is very far from a solution, the number of equations being altogether too small for the unknown quantities. Our position resembles that of the impecunious man ignorant of culinary mysteries who watches the entrances of a great hotel. He sees the ruddy beef and much dimpled bottle which go in, but fails to understand their exact relations to the ruddy cheeks and ruddier noses which go out at the front and the garbage carried off at the back.

The chemical story of glykogen can be very briefly told. It is, when dry and pure, a white powder, perfectly amorphous, showing nowhere the least tendency to crystallize. It is soluble in water, at least it seems to go into a solution of a peculiar opalescent character. It rotates the plane of polarized light to the right three, or even four, times as much as glucose. The opalescent solution can be cleared by the addition of an alkali or an organic acid, but it is probable that a modification of the glykogen is brought about by this treatment. It is precipitated by alcohol and by ether, in other words, is insoluble in them. The solution, which by the way is tasteless, filters readily but diffuses very slowly.

The ordinary method for obtaining glykogen is simple in principle, and for its best form we are indebted to Brücke. The tissues to be examined are minced as finely as possible, and extracted in hot water as long and as often as anything is taken up. The filtrate is then freed from such albuminoid bodies as may have passed into the hot solution, and the glykogen is precipitated by alcohol, washed, redissolved, and again precipitated until the desired degree of purity is attained. It is usually considered easy to obtain perfectly pure glykogen, free from salts and leaving no ash upon combustion, but there is apparently a discrepancy in the statements, for only a few weeks ago a cautious worker in this department reported that he found perfectly pure glykogen which he had very carefully prepared to remain in solution despite the addition of a

¹ Read before the Massachusetts Medical Society, June 12, 1883.

this case there is merely a question of toleration, and as long as the general system is in good condition, the heart is not likely to give rise to trouble. The patient has now been in the hospital a week, and, with the nourishing diet, rest, and freedom from anxiety which he has had here, he has in this short time already improved to a very appreciable extent, as I am given to understand.

As to the matter of dyspnoea it is too much the custom for physicians to tell their patients suffering from cardiac disease that they must be exceedingly careful about taking exercise for fear of evil results, but this kind of advice has a bad effect on such patients. In the first place it keeps their minds continually on the subject of their hearts, which of itself is very injurious, and, secondly, it deprives them of that amount of exercise which is essential to the maintenance of health, and which, indeed, as a rule, they could take perfectly well. The safest plan is to direct such patients to take just as much exercise as they can without inconvenience or discomfort.

In the case of our second patient, whom I now bring before you, we notice on inspection of the chest only one movement instead of two, as in the other, at the apex of the heart, while there is in addition a second movement at the base. The heart is undoubtedly enlarged because the apex beat, as you will observe, is considerably lower down than it ought to be. Unlike the former case it is also found much further to the left than its normal position, a point which leads us to infer the presence of mitral disease. In this respect the first case was an exception to the general rule, the apex beat being carried so little to the left that it would, perhaps, seem to indicate an aortic rather than a mitral affection. On account of the strength of the impulse in the present instance we infer that there is hypertrophy rather than dilatation of the heart.

On auscultation we get a systolic murmur at the apex which differs from that in the other case in being less loud, much lower in pitch, and not of such a marked bellows-like character. Again, however, there is no evidence of any mitral obstruction, but when we apply the stethoscope at the base we get with each systole a loud, rough murmur, which must therefore be a direct aortic murmur. But in addition, instead of the second sound of the heart there is found another rough murmur, so that we have here a systolic and diastolic aortic murmur besides the systolic mitral murmur. The latter is much weaker in tone than the aortic murmurs, but notwithstanding this it is quite possible that the mitral disease may be more extensive than the aortic. The practical lesson to be learned from this is that it is never safe to judge of the extent of disease of the heart from the intensity and character of the murmurs heard. I find in this case no evidence of dilatation of the aorta, though the disease is in the form of a sacculated aneurysm, and it is not the cardiac disease. I would therefore advise you to form a diagnosis of the nature and extent of the disease from the nature and position of the murmurs heard.

This patient is a man of an age which, as a rule, occurs with a certain degree of frequency, however, and when this disease is almost invariably fatal. This he denies, but has never had

we shall have to place the weight of pathological authority against the word of the patient.

On questioning him I find that notwithstanding the fact that he has an enlarged heart, with both mitral and aortic lesions, he is able to work hard, and that he manages to get along very well altogether with the exception of a pain in his side sometimes. His heart is really much larger than that of the other patient, but he suffers less inconvenience because the disease is compensated for by predominant hypertrophy while in the other case the heart has reached the limit of its growth. In the latter the cardiac muscle becomes more or less thinned, and the predilatation gives rise to greater weakness and distress with respiration.

Our next patient is a Bohemian, who speaks no English. On inspection and palpation I find strong impulses, and find that the one at the apex is as strong as a second one that is higher up. The apex being lowered and carried considerably to the left in this case also, we have a sufficient ground to guess that here again there is a dilatation. Inspection reveals the presence of a bellows-like systolic murmur. At the apex a systolic murmur we form the impression of gurgitation without obstruction. At the base the only audible murmur, which is simple, is at its maximum intensity. Therefore, a case of dilatation of the heart, which is principally affected by the aortic second sound, and the murmur between the two depends on the intensification of the sound enabled to be heard at the base.

In the present case we amine to consider the larger impulses in the infant sound the dilated heart.

The

ent for the liver must be of great importance in bringing about further changes. The glycogen in the muscle but little is of value can hardly be questioned. It is already mentioned, that large quantities of glycogen are present in the muscular tissue after feeding, and during fasting there is a marked diminution of the quantity. A similar diminution seems to occur in the liver. The exact extent to which muscular glycogen is used for the total amount of glycogen in the body is not yet made out, for in some of the cases of inanition the conditions of hunger were much complicated by bodily activity. Until very recently the inanition was supposed to be associated with a rapid glycogen consumption, the acid reaction of such a condition being associated with the changes of the sugar which the glycogen had been transformed. It is now found, however, that the rigor mortis itself is not necessarily associated with a lessening of the glycogen, if putrefactive changes be avoided; if these be prevented then the glycogen is rapidly used up. The true solution of the acidification of the rigid muscle has not yet been reached, for it does not follow that more acid is really present because the acid reaction has increased, as two observers have shown for the acidification of tetanus.

It seems that there is a direct relation between glycogen and muscle work, for there are experiments showing that the working muscle can saccharify the glycogen on the one hand, while, as Kobert has very recently shown, the introduction of glycogen increases the amount of work a muscle can perform.

If we wish, then, to summarize briefly, we may say: The presence of glycogen is closely associated with the first steps of nutrition. This is not only clearly shown by its increase in various tissues after taking food, but its presence in large quantities in the embryo—in rapidly growing cells—would seem to indicate its prime importance. Activity and hunger lessen its amount, but this may be interpreted in two ways, since the disappearance may be only the normal transformation for which no compensation is furnished, or its transformation may be the actual source or one source of the muscle power. But one point should not be left out of sight, that wherever the appearance of any putrefactive change can be assumed we shall find a marked diminution of glycogen, and it becomes a serious question how far the disappearance of glycogen as reported in all less recent investigations has been due to some putrefaction, in other words, has not been merely functional. In these times when the body no less than the air is full of bacteria and germs, we may fairly have our suspicions of earlier work, for the golden age of science lies in the future, and not in the past.

It is thought by some that the most important part of a scientific paper, as of a sermon, lies in the personal application. The most natural one here would be with reference to diabetes, and that can, frankly, be but negative.

Concerning diabetes, however, there are a few things to be borne in mind. In the first place, as Von Wittich has happily remarked, it is by no means certain that what goes by this name is really only one disease; it may be that a number of different complaints have been classed together simply because our attention has been directed mainly to one noteworthy feature common to them all, the excretion of sugar. But this is not the only important feature, and the excretion of

considerable amount of alcohol, while the addition of a minute amount of chloride of sodium caused a complete precipitation. It is worthy of remark that an analogous behavior of albumen was reported some years ago; that is, that albumen, when perfectly freed from any admixture of salts, lost many of its peculiarities of coagulation.

Glykogen treated with iodine assumes a red color, like that of good port wine. Some varieties of coloring have been reported for the glykogen obtained from various sources, but there is no great regularity in them, and no sufficient explanation has been found for such irregularities.

Under the influence of various acids, and particularly of numerous ferments, glykogen becomes more or less changed, and these changes can be to some extent traced by the behavior of the body to iodine, so that a long series of intermediate substances may perhaps be postulated, bearing a relation to glykogen and sugar like that borne by the various dextrines to the starches and their sugar products.

In so far, however, as the postulation of such substances depends upon the iodine reaction we ought to bear carefully in mind that this is frequently very misleading. The end product of these changes interests us most. It is a sugar, and was for a long time supposed to be grape sugar, — glucose. Within a few years it has been shown that the action of the ferments (diastase as well as the salivary and the pancreatic ferment) on glykogen produces a sugar not unlike glucose, and yet different enough to be of importance. This sugar, known as maltose, has the noteworthy peculiarity of reducing cupric oxide much less than glucose does. According to some older investigations of Nasse there is perhaps yet another sugar to be distinguished from dextrose and maltose, which he proposed to name *ptyalose*. The important point, however, is this, that for years many have assumed dextrose to be the sugar obtained from glykogen by the action of the ferments or the acids, and have calculated the amount of glykogen from the reduction of cupric oxide by this sugar. If, now, we have a mixture of dextrose and one or more other sugars of much less power in reducing cupric oxide, evidently many of the deductions hitherto made may call for much modification.

The exact chemical composition of glykogen is not certainly known. It belongs to the carbohydrates, that is, it contains only carbon, oxygen, and hydrogen, these latter in the same proportions as water. Hoppe-Seyler gives it the formula: $C_6H_{10}O_5$.

Despite the variety of sources from which it has been obtained no marked difference has been found, except the slight irregularities in the behavior to iodine. We are not, then, as yet justified in speaking of different glykogens. Had we to do with a crystallizable substance we might, perhaps, recognize differences which are not now apparent.

If we were to name the sources from which we can obtain glykogen, it would be necessary to mention not only almost all the tissues of the vertebrate body, but we should have to include many other forms of animal life, for it has been found notably in mollusks and in some of the crustacea, and in large quantities in insects and many worms. It is, perhaps, a significant fact that no such thing as a vegetable glykogen has been found, — a fact, too, that has never received the attention it probably deserves.

It interests us especially to remember that the mam-

malian liver and muscular tissues contain very considerable amounts of glykogen, and this is true not only of the developed animal but also of the new-born, which have not yet received any nourishment save through the uterus or in the egg.

The presence of glykogen in the muscles is no new discovery, but it is surprising to see how very little attention is paid to it in the text-books. The amount of muscle glykogen is evidently not appreciated by most writers. The percentage of glykogen found in muscular tissue is small as compared with that of the liver, but if you will take the trouble to figure it out you will find that the total amount in all the muscles is oftentimes not very much less than that found in the liver. That this is actually the case was demonstrated some three years ago by Boehm, who worked up the liver and most of the muscles of a cat, and obtained nearly the same amount of glykogen from each tissue. At the same time he demonstrated the exceeding difficulty of fully extracting the muscles, and showed that his own previous results in this direction had involved a possible error of twenty-five per cent. The reason of this is to be found in the tenacity with which the coagulated muscle tissue retains the glykogen, it being much more difficult to prepare it for extraction than the softer tissue of the liver. In view of this fact — and I see no reason to question the trustworthiness of Boehm's statement — it is clear that all previous observations on the quantity of muscle glykogen and its behavior under various influences are subject to a very considerable correction.

The form in which glykogen is stored up in the muscles is unknown. There are, I think, no investigations reported in which it has been seen in any such tissue. For the liver we have somewhat more definite observations. In the cells of this organ conglomerations have been seen whose behavior to iodine is such that we are warranted in supposing that we have actually the glykogen stored up in the cell itself, just as reserve starch grains may be seen in plants. Besides these shiny clumps of glykogen in the cells there may, of course, be more or less in the surrounding liquids. Whether a similar storage takes place in the muscle we do not know; the liver may be a magazine from which the muscles are supplied.

Concerning the conditions which favor the increase of the glykogen in the liver or the muscles, as well as the conditions favoring its disappearance, there is unfortunately much disagreement, despite the very large number of experiments reported.

On one point, however, there is general unanimity, that feeding increases while hunger distinctly decreases the amount of glykogen. Among the foods, those containing sugar, or whose digestion produced much sugar, have seemed especially efficacious; but it had been found that many other materials, as flesh, for example, or fibrine (to which no suspicion of an admixture of a carbohydrate could attach itself), were also capable of causing a distinct increase of our substance in the liver.

The influence of the carbohydrates admits of various explanations. The glykogen might be formed directly from them by some synthetic process, which prepared it to be stored up until wanted. Or the carbohydrates might take the place of the glykogen already in the liver, and being constantly stored up there, but only to be normally carried off again nearly as rapidly. In this case it will be seen that an increase of the glykogen

could take place running parallel with the inflow of the carbohydrates, just as a mill-pond may fill up or remain full if the busy mill can only get its power from some other source. Yet another simple explanation offers itself: A portion of the carbohydrates may be changed directly into glycogen, the remainder being worked up otherwise and acting in some way as a stimulus to the formation of glycogen out of other substances.

Not a little of this difficulty has been occasioned by the very natural view that the liver sugar came directly from the glycogen, — a view that now bids fair to undergo very marked modification. This association of ideas dates back to the very discovery of glycogen, and saccharification has been, tacitly at least, assumed as the change which it must undergo, and what is more, the sugar found anywhere in the body has often been referred to glycogen as its forerunner.

Sugar is found in the liver, and its increase after death has long been known, and a decrease of glycogen has been postulated, or even seemed to be shown, to be associated with this change. It does, indeed, look as though some such relationship really did exist in the rabbit, which, with the frog, has always held a high place in the practical friendships of the physiologist. Be that as it may, this view of the relations of the liver sugar has recently — in the past few years, I mean — received a severe blow. The assumption that some ferment in the liver changes glycogen into grape sugar has lost much of its validity; for it has been shown that while glycogen can be changed by acids into glucose, the usual change by ferments is into one or more other sugars of a different character, for which the general name ferment sugar has been proposed, and up to the present time the demonstration of such a ferment — a specific saccharine ferment in the liver — has not been made. Not only this — it has also been clearly shown that the development of sugar in the liver as a post-mortem change is the development of grape sugar, and is not associated with a diminution of the glycogen, or, at least, that the disappearance of the glycogen bears no relation to the development of sugar. Of greater importance still is the demonstration that the liver is capable of forming sugar out of albuminoid material, or, more exactly, out of peptone. It has been found that the introduction of peptone through the intestinal tract, or through blood-vessels, causes an increase of the liver sugar. It has further been shown that this transformation of peptone is actually performed by the liver cells themselves. It is perhaps known to many members of the Society that in finely-minced fresh tissue a sufficiency of cells may be kept alive at a low temperature, and by the aid of properly aerated blood, for a sufficient length of time to enable us to demonstrate the actual power of such cells in producing chemical changes which are more or less characteristic of the organ. In this way the synthetic power of various groups of cells has been shown, and the method promises to be of great value in other directions. Seegen has found (about two years ago) that such liver cells transform peptone into sugar, while no development of sugar takes place in the cells which are simply exposed to the aerated blood. Thus the alteration of albuminoid material would seem to be a distinct function of the liver, — a function, then, which is carried on independently, it may be, of the glycogen present. This may prove to be a function of other organs, — the point is not yet investigated, —

but its establishment for the liver must be of great value in understanding further changes.

Of the value of glycogen to the muscle but little is known. That it is of value can hardly be questioned. We know, as already mentioned, that large quantities of it are found in muscular tissue after feeding, and that hunger causes a marked diminution of the quantity, and a similar diminution seems to occur in the working muscle. The exact extent to which muscular work lessens the total amount of glycogen in the body is not clearly made out, for in some of the cases of diminution the conditions of hunger were much complicated by bodily activity. Until very recently the rigor mortis was supposed to be associated with a great glycogen consumption, the acid reaction of such tissues being associated with the changes of the sugar into which the glycogen had been transformed. Boehm found, however, that the rigor mortis itself is not necessarily associated with a lessening of the glycogen if putrefactive changes be avoided; if these be present then the glycogen is rapidly used up. The true solution of the acidification of the rigid muscle has not yet been reached, for it does not follow that more acid is really present because the acid reaction has increased, as two observers have shown for the acidification of tetanus.

It seems that there is a direct relation between glycogen and muscle work, for there are experiments showing that the working muscle can saccharify the glycogen on the one hand, while, as Kobert has very recently shown, the introduction of glycogen increases the amount of work a muscle can perform.

If we wish, then, to summarize briefly, we may say: The presence of glycogen is closely associated with the first steps of nutrition. This is not only clearly shown by its increase in various tissues after taking food, but its presence in large quantities in the embryo — in rapidly growing cells — would seem to indicate its prime importance. Activity and hunger lessen its amount, but this may be interpreted in two ways, since the disappearance may be only the normal transformation for which no compensation is furnished, or its transformation may be the actual source or one source of the muscle power. But one point should not be left out of sight, that wherever the appearance of any putrefactive change can be assumed we shall find a marked diminution of glycogen, and it becomes a serious question how far the disappearance of glycogen as reported in all less recent investigations has been due to some putrefaction, in other words, has not been merely functional. In these times when the body no less than the air is full of bacteria and germs, we may fairly have our suspicions of earlier work, for the golden age of science lies in the future, and not in the past.

It is thought by some that the most important part of a scientific paper, as of a sermon, lies in the personal application. The most natural one here would be with reference to diabetes, and that can, frankly, be but negative.

Concerning diabetes, however, there are a few things to be borne in mind. In the first place, as Von Wittich has happily remarked, it is by no means certain that what goes by this name is really only one disease; it may be that a number of different complaints have been classed together simply because our attention has been directed mainly to one noteworthy feature common to them all, the excretion of sugar. But this is not the only important feature, and the excretion of

sugar, in smaller quantities to be sure, is met with under conditions which seem to be physiological. The experiments of Eichhorst which bear upon this point have not, I believe, been repeated. The excessive amount of water excreted is, perhaps, one indication of changes which are not all explicable by the hypothetical liver ferment. If we may trust the reports on this point the excretion of water is often greater than the amount taken into the body would cover, yet there is here room enough for suspicion that water may have been surreptitiously introduced. We ought not to forget, too, that the water very frequently bears no relation to the amount of sugar excreted, and that an enormous increase of the urine is met with under totally different conditions, as in the insipid form of diabetes and in hysteria.

In the sugar form of the disease in question there is a marked increase in the outflow of nitrogenous compounds, principally urea. This is often explained as a more thorough washing out than normally, an ingenious explanation to be sure, but not in full accord with what we think we know about the physiological excretion of urea. As Oppenheim has shown, the increase in the water output under physiological conditions is associated with an increase of urea, but only at first, and to be followed by a diminution which speedily reduces the excretion to its average. Not so in diabetes mellitus; here the increase in urea is marked and continues, and it remains high, too, when the food supply is so regulated that no increase in the nitrogenous inflow can be used to explain the increased outflow. One other circumstance, for which, however, the careful verification by further observations is desirable, shows that the tissue change in the diabetic differs materially from that of the natural man. It has been demonstrated clearly enough for our acceptance that muscle work where the individual is in a state of nitrogen equilibrium, as it is called, is not associated with an increase in the nitrogenous excretion, but in diabetes it has been found that very moderate muscular effort may produce a marked increase of these products, an observation which would seem to contrast curiously with the reported improvement in some diabetics when induced to work their muscles.

The other results of the treatment of diabetes mellitus are not in full accord in furnishing an explanation of the disease. If we read over the numerous dietaries proposed for the diabetic patient as we find them collated, for example, in Bauer's recent monograph, we must be struck by the immense variety in the limitations to which doctors have subjected their patients. There is a practical agreement but in one point, the general avoidance of carbohydrates, and even here the milk treatment and, possibly that with koumiss, forms a notable exception.

This I suppose we must accept as a fact of experience, that the condition of the diabetic generally improves under a regimen where the carbohydrates are avoided. The difficulty lies in the theoretical deduction which this observation permits us to make. In other words the connection between the sugar which is formed by digestion and that found in the urine is not clear. We have good reason to believe that the carbohydrates when digested form not altogether grape sugar, but other and different sugars, and it does not follow that these are so easily transformed into grape sugar, although they may be so changed.

The use of a careful meat diet has been a main stay

in practice. When we come to analyze it, however, as a support for any theory, we are met by a serious difficulty. Digested meat furnishes peptone, which when taken up can be transformed by the liver into grape sugar, which is the very sugar of diabetic urine.

Then, too, the transformation of glycogen by any known normal ferment no less than that of the carbohydrates so rigidly avoided by diabetics does not give us grape sugar, but another or, perhaps, various other sugars. If this be so, the theory that finds in diabetes only a rapid transformation of glycogen into sugar must look about for some new props.

A CASE OF THROMBOSIS OF THE STRAIGHT CEREBRAL SINUS.

BY T. M. ROTCH, M. D.

THE following case occurred at the West End Nursery, where it was under the care of Dr. H. C. Haven. A boy, six weeks old, was admitted to a bed in the house January 6, 1882. The parents were Americans, and so far as could be ascertained were healthy; the mother died of septicæmia following the birth of this infant, and the infant had never been put to the breast, but had had good care, and had been fed on cow's milk and water, on which it thrived, and it was apparently, on entering the nursery, a strong, healthy infant, weighing 4805 grammes, which at six weeks is decidedly greater than the average, for allowing the average weight of the male infant at birth to be 3250 grammes, and the gain per day, giving a liberal allowance, thirty grammes, the weight of an infant six weeks old should be 4510 grammes, making this especial infant weigh 295 grammes more than the average infant of the same age.

The infant was put on the usual diet given at the nursery to infants six weeks old, namely, one half milk and one half water, and he seemed to thrive during the first week, the appetite being good, and there being two or three apparently well digested dejections daily. He slept well, and no one would have known that anything was the matter with him if he had not been carefully weighed and found to be steadily losing.

The following is the record of his weight from the time of entrance, January 16th, until his death, January 30th:—

Date.	Grammes.	Gain or Loss.
January 16th.	4805	—
January 18th.	4655	Loss 150
January 20th.	4630	Loss 25.
January 21st.	4595	Loss 35.
January 22d.	4610	Gain 15.
January 23d.	4590	Loss 20.
January 24th.	4425	Loss 65.
January 25th.	4420	Loss 5.
January 26th.	4420	Loss 0.
January 27th, 8.30 A. M.	4110	Loss 310
January 27th, 8 P. M.	3995	Loss 115
January 27th, 7 P. M.	3925	Loss 70
January 28th.	3845	Gain 20.
January 29th.	3905	Gain 20.
January 30th.	3735	Loss 280.

January 23d, the loss in weight being very evident, the amount of milk was increased, but as the loss continued, barley water was substituted for the water. The barley water, however, was not relished, and was vomited; he was therefore on the 26th again put on

milk and water, but vomited twice, and on the 27th had one thin, watery discharge from the bowels. Mellin's food was then given.

January 28th he did not look well and seemed weak; brandy was given, and a wet nurse, whose milk was eleven days old, was procured; he nursed pretty well at first, but afterwards would only nurse for a few minutes. At seven P. M. he was carefully examined by Dr. Haven and myself with the following result: Temperature 38° F.; respiration natural, 35. No cough; pupils natural and contract well; fontanelle very slightly depressed; does not seem to be in pain, but is rather feeble. Auscultation and percussion of lungs and heart normal. No enlargement of spleen or liver detected. Nothing abnormal in mouth or throat.

January 29th had a natural yellow dejection. Vomited considerably during the day whenever food was given.

Six P. M. Rejected breast; pupils contracted; rhythmical contractions of arms and legs first on one side and then on the other; opisthotonos of upper part of spine; head and eyes drawn to the right; no rigidity or paralysis of legs or arms. Fontanelle not depressed. Rapid contractions of eyelids first on one side and then on the other.

January 30th. Six rather watery dejections. The muscular contractions ceased, but the opisthotonos continued until death at 6.30 P. M., when it disappeared.

Autopsy fifteen hours after death. Slight rigor mortis present. Body small, somewhat emaciated. Face thin and pinched.

Calvaria removed without difficulty. Nothing noticed on internal surface of dura mater. In the straight sinus, and in the portion of the superior longitudinal immediately adjoining this, was a firm red clot slightly decolorized in parts, but easily removed from the vessels. The other sinuses contained a little loosely clotted blood.

The surface of the brain was moist, and the spaces between the convolutions were slightly opaque and cloudy from the presence of a serous fluid. The blood vessels of the pia mater were injected.

Upon opening the lateral ventricles and turning back the fornix, the floor of the ventricles was seen covered with numerous thromboses of the blood-vessels, the surface universally reddened, the ependyma ragged and infiltrated, and a bloody serous fluid was found free in the cavity of the ventricles. The veins of the choroid plexus were filled with dark clotted blood which was directly continuous with that found in the straight sinus. The substance of the brain was moist.

The spinal cord presented a moderate injection of the vessels of the pia mater.

Both sides of the heart contained dark loose clots. The lungs were slightly oedematous.

The other organs presented nothing abnormal.

Diagnosis. Sinus thrombosis. Intra-ventricular hæmorrhage and softening of the floor of the ventricles. Oedema of the lungs.

As a summary of the case we have an infant, six weeks old, apparently strong and well on January 16th, losing over 200 grammes in a week up to January 23d without showing any other symptom of disease. Then on the 27th losing 495 grammes, and attacked two days later with convulsions, followed by death, and presenting at the autopsy nothing abnormal excepting a capillary hæmorrhage into the ventricles caused by a thrombosis of the straight cerebral sinus.

THE EARLY SYMPTOMS OF GENERAL PARALYSIS OF THE INSANE.¹

BY WILLIAM B. GOLDSMITH, M. D., OF DANVERS.

As physician in hospitals for the insane I have received many cases of general paralysis in which there had been an entire failure to appreciate correctly the at least possible import of various symptoms appearing before the unmistakable ones, which failure was sometimes attended with serious injury to the patients or others; for in disorders affecting the organ which controls the individual in his moral obligations, professional duties, social relations, and business transactions, the early recognition even of disease which we are forced to regard as incurable has more practical importance than exists in disease of other organs where an early accuracy of diagnosis often simply hastens the "verdict of despair" to the patient without benefiting his fellows, and among the various forms of mental disorder there is probably none which, in proportion to its frequency, so often, before its recognition, ruins the laboriously acquired and carefully guarded reputation of a lifetime, or involves relatives in scandal and financial reverses.

This failure of appreciation of early symptoms is, probably, partly because general paralysis, unlike most other forms of disease attended with mental decay, does not usually select its victims from those who have inherited weak and unstable nervous organization, but from the capable and vigorous in whom no one expects weakness to show itself, and partly because certain mental symptoms are so striking that we are liable to identify them with the disease, and not recognize it without them.

My remarks are based on an analysis of the histories of one hundred cases, and I think that they possess more accuracy as to fact than the average of such histories, because I have taken the cases of such patients only as had been under the careful observation of friends whom I believe to be intelligent and reliable.

This plan is open to the objection that the facts are largely obtained from non-medical and non-expert observers, but this is a source of error that cannot be avoided in studying mental disease, because the earlier symptoms have usually persisted some time before the case comes to the general practitioner, and still longer before it reaches the specialist, and as subjective examinations as to previous history cannot be considered reliable the observation of friends is our only resource; and it may be said in favor of the accuracy of my facts, that friends are much more likely to recall slight changes in a retrospect, and to frankly tell the whole truth concerning mental symptoms when they have become sufficiently marked to render it desirable to send the patient to a hospital, than earlier when they feel anxious to cover up improprieties and weaknesses. It is also true of these cases that they were selected at a time when the diagnosis was unmistakable, so that whatever may be said as to the occurrence of similar nervous symptoms in patients who do not become general paralytics, it is undoubtedly true that they were in these patients the warnings of that disease; and my aim is not so much to record the symptoms after they have become sufficiently characteristic for a certain diagnosis, as to show what are actual danger signals

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that should render the physician alert and observing, the recognition and observance of which would, I am sure, prevent much financial loss as well as danger to individuals, and unjust condemnation by legal tribunals and society; and it is reasonable to suppose that the nearer the beginning we start the more likely we are to prevent the dire ending which we now regard as inevitable. That these signals will be most varied and inconstant follows from the nature of the disease they indicate, as we must remember that there is no variety of nerve tissue in the cerebro-spinal or sympathetic system which has not been proved to suffer degenerative lesion consequent on this disease, or which has not been claimed, with fair assurance of accuracy, to have been the seat of the initial active lesion of its commencement. Lewis has traced the descending degeneration as far as the sciatic nerve, and Westphal and others have described ascending degeneration from lesions of the spinal cord, traumatic and others, while some recent observers think that some cases at least have the origin ascribed to the disease by Messrs. Poincaré and Bonnet, who, in 1863, found marked changes in the sympathetic ganglia, and considered them primary.

As this paper is not designed for those who have given special attention to nervous diseases, I will venture to recall the variety of symptoms likely to be present, and I will enumerate them as nearly as possible in what I believe to be their order of frequency. It is a disease always presenting during its course both motor and mental symptoms, which, however, may vary greatly in their character, intensity, and order of appearance. The motor symptoms are always evidences of diminished muscular power or control, and may affect any muscles, but usually do appear first in those groups whose functions require the greatest harmony and nicest adjustment in action. Hence the common early motor symptoms are defective articulation, tremor of the tongue, tremor of the facial muscles when expressing emotion, irregular chirography, inability to control the hands in such nice movements as are requisite in playing musical instruments, general tremor, incoördination or paretic weakness of gait, and occasionally localized chronic spasms, most frequent in the face. Perhaps, too, the seizures which occur sometimes during the history of most cases may best be included with the motor symptoms. These may occur at any time, and may simulate petit mal, grand mal, apoplexy, or have a mixed character peculiarly their own.

Of sensory symptoms there may be dysæsthesia, hyperæsthesia, anæsthesia, and, exceptionally, almost any variety of neuralgia.

My experience leads me to regard disorder of the special senses as a rare early symptom, and not very frequent later one, but both impaired function and hallucinations of all are reported.

To the sympathetic system, probably, may properly be charged most of the pupillary changes, which are, inequality, usually shown most strikingly by the failure of one pupil to dilate as readily as the other in moderate light; a marked decrease in the size of both, making sometimes the pin-hole pupil, and sluggishness in action in varying light, in accommodation, and in answer to sensory stimuli. To the vaso-motor control of the sympathetic must also, I think, be ascribed the irregularities in the superficial circulation frequently shown by localized or general flushings, resembling

that seen in one accustomed to alcoholics when slightly under their influence. There are other symptoms which cannot well be classified pathologically, but which possess some value for diagnostic purposes, as the condition of the tendon reflex, which may be not noticeably changed, increased, or absent.

Similar changes of increase or diminution may occur in the skin, cremasteric and sphincter reflexes, but are not often seen until later in the disease.

All known mental symptoms are found with greater or less frequency, those usually considered characteristic being a marked feeling of self-complacency and content, and delusions of wealth, greatness, and power.

Eighty-seven of my one hundred cases were men, and thirteen women, but I have not considered them separately, except as regards some mental symptoms which seem modified by sex.

The frequency with which each of the various physical symptoms mentioned appeared as the first physical change is as follows:—

Some defect of articulation thirty-eight times. The text-books often attempt to enumerate various kinds of articulatory defect that occur in general paralysis, but any such classification is rather incomplete and misleading, as any part of the articulatory apparatus may be chiefly affected and all kinds of disorder occasioned thereby. A hesitancy of speech, recognized best when the patient is quietly conversing, and an occasional elision of a syllable, best recognized when the patient is earnestly conversing, are probably most frequent.

Some form of seizure appeared first twenty times. Thirteen of these seizures resembled closely the convulsions of grand mal, the patient falling to the ground and being generally convulsed, but none of them are known to have given the epileptic cry, and the succeeding coma or stupor was much more pronounced and prolonged than in ordinary epilepsy. Four of this thirteen were sent to the hospital diagnosticated simply as cases of epilepsy.

Four of the seizures resembled petit mal, the patients losing consciousness, but having no noticeable convulsion. Three were considered apoplectic attacks and resembled apoplexy in that the patient fell, and remained completely or partially comatose for a time, with little or no convulsive movement. My cases indicate that seizures should have greater prominence as early symptoms than is given them by most authors, but I am unable to say whether they are exceptional in this respect or not.

Tremor of the lips and face was noticed first eight times.

Incoördination of gait, ten times.

Diminished sexual power, six times.

General tremor, six times.

Cutaneous numbness and tingling, three times.

Changed chirography, two times.

Dilatation of superficial capillaries and sensations of heat, once.

Dilatation of superficial capillaries and marked hyperidrosis, once. (I have seen this same marked hyperidrosis in one other case as a later symptom.)

Localized cutaneous hyperæsthesia, once.

General cutaneous hyperæsthesia, once.

Ptosis, external strabismus, and diplopia, once in a syphilitic case.

Diplopia alone, once in a syphilitic case.

Failure of sight from atrophy of the optic nerve, once in a syphilitic case.

Nine of these patients also suffered from decided pain and discomfort in the head previous to other symptoms — it being sufficiently marked in four cases to excite suspicion of brain disease.

There are some other symptoms which may have appeared early and escaped notice, as they are of a character not likely to attract the attention of the non-medical observer, and I can only give their relative frequency at the time the patients were admitted to the hospital, which was at varying stages of the disease. Thus the patellar tendon reflex appeared normal in forty-six cases; markedly supra-normal in twenty-four cases; very marked but not necessarily supra-normal in fourteen; very slight but not necessarily below normal in twelve; absent in four.

The number of cases in which it was found supra-normal is comparatively greater, and the number in which it was found slight or absent less, than in those observed by Mickle in England and Westphal in Germany, but corresponds pretty closely with Shaw's observation in this country.

My whole experience, which extends over a larger number of cases than the one hundred mentioned, agrees with the ratios of their figures as to patellar tendon reflex, and my estimate of its usefulness in diagnosis is as follows: The absence of change does not render the disease improbable.

Well-marked exaggeration in both legs is strong corroborative evidence of general paralysis. Diminution or absence of it is decidedly less so, but still has some value.

There has always been disordered gait in the cases where I have seen it absent; and I have no doubt tabetic lesion of the cord.

I carefully observed the length of duration of the disease at the time when the examination of the knee jerk was made, but there was no indication of a connection of particular conditions with different stages.

On admission the size of the pupils was unequal in sixteen of my cases, the right being larger in ten, and the left in six. Both pupils were abnormally small in six cases, and both dilated in four. None of these changes seemed more frequent at one stage of the disease than at another.

These figures indicate that inequality of the pupils is not very common, and my own opinion, based on the examination of other cases, in addition to these, is that its diagnostic importance is usually overrated by the text-books, as its absence has no significance and its presence may be the result of several causes other than general paralysis.

The mental change which appeared first most frequently was failure of capacity. This was true of thirty-six cases, it being chiefly noticeable in nineteen, because of impaired power of memory, and I will venture to remind you that, as this failure is most frequently due to lessened power of attention, the examination should not be concerning events occurring long ago when there was presumably mental integrity, but concerning trivial matters of recent occurrence. Dr. Holmes makes his old man testily refute this imputation of failing memory by saying: "I remember my great-grandma! She's been dead these sixty years."

And many a general paralytic can give you an accurate history of the events of his previous life long past, when he is unable to tell you where he dined day before yesterday. It is also true that the memory will occasionally assist the patient to conceal failure of

reasoning power, as in the case mentioned by Mendel, where the patient answered readily and correctly that twelve times twelve is one hundred and forty-four, but made twelve times thirteen a less number.

In eleven cases the mental failure was evinced by poor judgment in business, without manifest change in activity or habits of life, and in six cases this entailed serious financial reverses on the patient and his family.

In the remaining six cases of mental failure it appeared simply in mental sluggishness, great and unaccustomed disinclination for mental or physical exertion, accompanied in three cases by a striking tendency to sleep.

Marked depression without obvious delusion was noticed first twenty-two times. Marked exhilaration and self-satisfaction, seventeen times. This was accompanied by erotism in nine cases, two of them attempting rape, two indecent familiarities and exposure, and three began an unusual and scandalous course of licentiousness. Several others of this class, before abstemious, became addicted to alcoholic excesses, and attention was attracted to two by thefts which were undoubtedly the outcome of the disease, though not so recognized until the courts had taken action in both cases and one of the men was in prison.

Insane delusions were noticed first twenty-five times. They were the characteristic ones of wealth and greatness, in twelve cases.

Six showed a variety of delusions of persecution; six believed their wives unfaithful, probably chiefly because their erotic desires met repulse, and were dangerous to them thereby; and one had general delusions, based on hallucinations of hearing.

Maniacal excitement, of extreme intensity, sometimes appeared very rarely in fifteen cases, but was not the first symptom noticed.

The thirteen women exhibited no marked variation from the men in physical symptoms, but the mental symptoms were commonly much less pronounced and active.

Six showed simple dementia. Three had definite delusions that men outraged them; and two, delusion that some spirit or angel had sexual intercourse with them.

Two had ordinary delusions of persecution. Several of those who had delusions of being outraged thought themselves pregnant; and this is, by some observers, considered a frequent delusion among female general paralytics. I think that the delusions as to sexual intercourse usually depend on the misinterpretation of an orgasm, experienced at night; and those of pregnancy, indirectly on the same, or on anomalous sensations in the abdomen.

Three of these women were of very good social position, and this is a larger proportion than is found abroad, where general paralysis is considered very rare among those having the social rank of ladies.

The relative time of appearance of the two classes of symptoms was as follows: In sixty-eight cases the mental and motor symptoms were noticed at the same time.

In twenty-four, mental symptoms alone first attracted attention; and in eight, the motor symptoms.

These figures are undoubtedly inaccurate, as slight changes, particularly of a motor character, might readily escape the notice of a non-expert observer, and some motor changes would unquestionably have been observed by an expert in many of the twenty-four cases

which are recorded as presenting mental symptoms alone at first, but they do show that much difference of time between the appearance of the two classes of symptoms is exceptional, though it is true that either may show remissions or intermissions early in the disease, so that their existence can only be learned by careful questioning as to the previous history. Thus, one may see a patient laboring under intense maniacal excitement, in whom no motor paresis can be detected, but who has a history of previous convulsive seizures, or attacks of unconsciousness, which change the diagnosis from curable mania to general paralysis. In one of my cases, a woman, marked defect of articulation was for some time regularly present each morning, but disappeared before noon, and it is not at all uncommon to see pronounced symptoms of any kind diminish greatly or disappear if the patient is changed from excitement and dissipation to a quiet routine of life.

In the few cases where mental symptoms appeared to me to unquestionably precede the physical, they were almost invariably those of marked depression not reaching the grade of positive insanity, and the physical symptom that appeared alone first most frequently was some form of seizure.

Finally, the symptoms presented by these cases appear to me to indicate, with the somewhat moderate weight of authority to which their numbers entitle them:—

(1.) That the striking and characteristic group of symptoms ascribed to the disease by Calmeil in 1826, and having greatest prominence in most text-books since, is to be found only exceptionally in the cases of to-day at the time when the diagnosis is the most important.

(2.) That physical and mental symptoms usually appear nearly synchronously, so that the physician has the presence or history of both to aid him when called upon for a diagnosis, and it is probable that most of those who report cases of general paralysis without mental impairment are not sufficiently expert to recognize a moderate degree of dementia.

(3.) That their observations agree with those of most writers in making defective articulation the most frequent and characteristic early motor symptom.

(4.) That changes in the pupils and disorders of gait are less frequent and have less value in diagnosis than is usually ascribed to them, and that given pupillary changes are no more frequent in one stage of the disease than in another.

(5.) That the patellar tendon reflex is found markedly supra-normal in nearly twenty-five per cent. of general paralytics, and that the presence of this symptom has strong corroborative value in diagnosis, though its absence has none, and that no peculiar condition of the patellar tendon reflex can be associated with any given stage of the disease.

(6.) That hallucination or impaired function of the special senses is very rare as an early symptom; hallucination (auditory) having been noticed first in but one case, and impaired vision but once in a syphilitic case. The diminution in the sense of smell, which Voisin thinks very frequent in the early stages, was not noticed in any of my cases, though it may have been present and escaped attention in some, as slight failure is difficult to recognize.

(7.) That it is of great importance in the case of a patient showing mental symptoms to inquire carefully

for a history of convulsions or loss of consciousness, as these were the first motor symptom in twenty of my cases.

(8.) That among mental symptoms the marked exhilaration, with delusions of wealth and greatness, which is usually considered the characteristic mental symptom, is present early in less than one fourth of the cases, and that simple failure of mental capacity and activity and mental depression are the more frequent first mental changes.

THE REMOVAL OF FOREIGN BODIES FROM THE HUMAN BLADDER BY A NEW INSTRUMENT.

BY JOHN W. MERRILL, JR., M. D., WEST SOMERVILLE, MASS.,
Fellow of the New Hampshire Medical Society.

CASE of Mr. H., aged thirty-five years, white, a native of Boston, by occupation a traveling salesman.

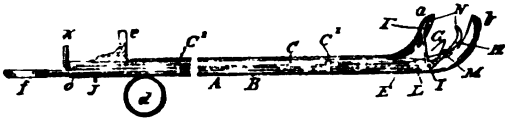
In September, 1880, he contracted gonorrhœa, and as a result of bad treatment and improper habits had a stricture situated four and a quarter inches from the meatus. He had difficulty in passing urine, and retained it at times until the bladder became distended and painful. His general condition became lowered, with loss of flesh, also with chills, fever, and profuse sweating. At this stage, ten months after contracting his disease, he consulted Dr. —, of Boston, who passed a catheter, and then sounds of increasing sizes up to a No. 20 F. He left the city somewhat improved.

In August, 1881, he returned to Boston in a bad condition, with all the symptoms as before stated, that is, chills, sweatings, and retention. He had neglected to pass sounds in the mean time. He called on Dr. —, who, to relieve him, passed with difficulty a No. 8 English catheter (after trying to pass a sound of larger size). This was forced through the stricture into the bladder, the distended bladder was emptied, and, on attempting to withdraw the catheter, it was found that the stricture had grasped it so tightly that it could not be removed. The doctor waited ten minutes for the spasm to pass off, and then gave the catheter a quick jerk, when lo! he held part in his hand and the remainder was in the urethra and bladder. The catheter had broken. After half an hour's useless endeavor to grasp the catheter with a long pair of forceps, he at the patient's request passed a sound and pushed it back into the bladder. The patient, with many oaths, would not submit to any further attempt to remove it, and left the doctor.

In September I made his acquaintance. He had the following symptoms: cystitis, frequent and painful micturition, pain at the meatus of the penis, pain in the region of the kidneys, and on passing a No. 16 F. steel sound I could feel the foreign body, and could get the click as the steel sound hit the incrustated catheter. I recommended that he have the urethra dilated by sounds gradually to a size sufficiently large to admit the passage of a No. 32 F. steel sound, and then pass in an instrument, grasp the catheter, and extract it. To this he agreed. The sounds were passed in Boston by my esteemed friend Mr. Charles Kelly, a medical student, until a No. 32 had been passed once every four or five days, and left

in fifteen to twenty minutes at a time. Perineal hypodermic injections of Magendie's solution of morphia were given him ten minutes before passing the second sound, when necessary, which controlled in a great measure the spasms of the urethra; two sounds were passed at a sitting. At times the piece of catheter would get into the prostate, but would not pass out. Injections of tepid water and morphia were repeatedly used without avail. It would get a certain distance and then cause the most intolerable pain and anguish, and the only way relief could be obtained was to pass a sound and push it back into the bladder.

I had in the mean time an instrument made, as per drawing, composed of a hollow sheath or catheter-tube,



having male and female blades, which can be opened and closed, and an extractor provided with gripping-claws adapted for insertion and operation within said sheath, in a manner hereinafter explained.

The sheath, A, is constructed of suitable metal, formed as a hollow tube, having the general shape of urethral sound or catheter, with a short curve at its entering end, which is properly and smoothly rounded, as shown. The sheath is formed of two parts, grooved together at their edges along the straight portion, so that the male part, A', can move longitudinally in the part B, for opening or closing the male and female blades, *a b*, which comprise the curved portion of the tube. Said blades, *a* and *b*, are both made hollow or concaved on their inner sides, the cavities being of sufficient size to receive and cover the jaws of the extractor, C, which is inserted and withdrawn through the sheath or catheter-tube as required. A ring or other suitable handle, *d*, is fixed on the outer end of the sheath for steadying and guiding the instrument when in use, while a suitable thumb-piece, *e*, is fixed on the shank of the male blade, A, for effecting the movement of said blade as desired.

The extractor, C, consists of a shaft or rod of convenient length and size to pass through the sheath, one end thereof being provided with a suitable handle or ring, *d*, while to its other end are hinged or pivoted, as at I, two claws or hooked grippers, F and H, the ends of which are curved toward each other and provided with sharp points, N, or with a series of serrations or pointed teeth. The form and size of these claws are such that they can be inclosed within the cavities of the blades, *a* and *b*, of the sheath A, or be drawn through the tube by means of the shaft C. A spring, G, is provided for forcing apart the claws, F and H, which spring is connected to one of said claws and arranged for pressing against the other as indicated.

An auxiliary shaft or rod is arranged along the shaft, running parallel therewith, and guided by bands C' or otherwise. One end of said auxiliary shaft is connected by a suitable link, L, to claw H, as indicated at M, while its opposite end is turned upward at a right angle, as at K, to form a handle or thumb-piece by which the shaft and claw can be actuated, and the claw H be closed against the claw F for gripping any substance that may come between them. The claws can

also be closed together by withdrawing the extractor shaft from the sheath.

Near the handle end of the extractor is a pin or lug, J, which is adapted to engage with a slot, O, formed in the end of the sheath to prevent the extractor from revolving within the sheath, or for retaining the claws, F and H, centrally within the hollows of the blades A and B. The claws can be made to have any suitable curvature and form of gripping points. By making the male and female blades with inner cavities, as shown, the claws are allowed space to pass around the substance or body which may lie between or be clasped by the blades. The blades may be made of sufficient strength and stiffness to crush moderately hard substances, although the instrument is not intended for crushing purposes.

By appointment Mr. H. came to Concord, N. H. (where I was then practicing), March 13, 1882, for operation. I gave him a large dose of bromide of quinia and aromatic sulphuric acid. I stood him up against the wall, and passed the instrument into the bladder, felt the foreign body, then drawing out the male blade grasped the piece of catheter between the lips, and, revolving it half way, passed down the extractor and seized the body; I then drew the male blade further out to keep back the mucous membrane of the bladder, and made traction on the extractor, and with force drew the piece of catheter out of the bladder through the instrument. It proved to be four and a half inches long. I closed the male blade against the female blade, rotating it to be sure none of the bladder wall was engaged in the lips, and then slowly withdrew it. A few drops of blood flowed, due to the size of the instrument. The operation lasted ten or fifteen minutes. He walked out of my office in half an hour after entering. No chills followed the operation. All inflammation has passed away, and he is now well.

On examining the piece of catheter on and in it I find a deposit of uric acid, oxalate of lime, phosphate of lime, triple phosphate; uric acid crystals seem to be the most abundant; the triple phosphate next. The weight of the deposit was thirty-eight and a half grains.

REPORT ON PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.¹

BY F. I. KNIGHT, M. D.

ON THE TREATMENT OF CHRONIC GRANULAR PHARYNGITIS BY THE GALVANO-CAUSTIC METHOD.

DR. GEORGE MACKERN, of Buenos Ayres,² says his apology for recording cases of such a common disease is, first, that they are cases of an advanced and severe type with certain peculiarities which he had not observed in London; second, the comparatively recent introduction of the galvano-caustic method of treatment; third, the fact of their being cases occurring in a country the climatic and hygienic peculiarities of which might possibly exercise some influence over the forms in which the affection manifests itself; fourth, the well-known chronicity and obstinacy of a disease which has hitherto resisted all ordinary modes of treatment. Case II. was in some respects the most

¹ Concluded from page 153.

² Archives of Laryngology, January 1, 1883.

satisfactory of all. The number of granules actually destroyed by the galvano-caustic formed but a small proportion of the number which existed at the beginning, but after each application a certain number of untouched granules would disappear. Dr. Mackern thinks this must be due to the destruction of the blood-vessels in connection with them, the process in this case being analogous to the rapid disappearance of torpid granulations in chronic ulcers when their edges are incised, where not only is the tension of the surrounding skin relieved, but a sort of local bleeding and consequent diminution in the engorgement is also to be considered.

The cause of the elongated and flabby state of the uvula in Case III. was considered to be the presence of the inflamed glands at its base producing inflammatory paralysis of the azygos uvulæ muscles; when the glands were destroyed the uvula regained its normal shape and irritability.

Several cases came under the author's observation showing marked venous vascularity of the pharynx with tracts of softened granular material. In many cases, too, the mucous membrane around these tracts was swollen and oedematous looking. All these were old-standing cases, and their chronicity forms an important factor in the ætiology. The author says that the presence of these softened masses can be explained as follows: Each granule in ordinary granular pharyngitis is connected with a minute branch of a vein whose main trunk is connected with certain areas, and the presence of the venous supply he believes to be secondary to the glandular hypertrophy, and due to it. The disease being neglected the glands continue to hypertrophy, neighboring ones coalesce and form the larger masses and tracts so common in advanced cases. *Pari passu* with this also increases the venous supply; hence the existence of the large, thin-walled veins. Degeneration of the gland cells takes place, and the masses soften down in the centre; hence the presence of the so-called "varicosities." Therefore Dr. Mackern has no hesitation in burning these large, softened masses, and as yet this method has proved efficacious without any evil result. As a rule, these larger masses require a second and even a third touch of the cautery, but they eventually disappear, and with them the abnormal venous supply. As regards the ætiology of granular pharyngitis three causes appear to the author to warrant more attention in connection with the disease in Buenos Ayres, namely, heredity, exposure to damp, and tobacco smoking.

Concerning the use of the galvano-caustic method the author says he has been uniformly pleased with the results in a great number of cases. Although apparently a severe measure no evil results have ever followed its use; it is convenient, painless, and cleanly, in fact it seems to be antiseptic, as the sloughing is uniformly followed by rapid and healthy healing.

THE PATHOLOGY AND RADICAL CURE OF HAY FEVER OR HAY ASTHMA.

Dr. Roe, of Rochester, read a paper on this subject before the Medical Society of the State of New York, February 6th.¹

Dr. Roe begins his paper by referring to the want of positive knowledge in regard to the nature of the disease, and the unsatisfactory character of its treatment. In this connection he says that in the works

on this subject we find usually no mention of any examination into the objective condition of the nasal passages, nor of any investigation as to the existence of any localized diseased condition which may predispose to the affection.

Dr. Roe claims that recent investigations show that the special cause for hay fever does not alone reside in a special peculiarity of a special irritant, which affects certain individuals in a peculiar manner, but in a special susceptibility of the tissue of the nasal passages of some individuals to be irritated by these substances when brought in contact with it; that this susceptibility of this tissue is occasioned by disease either latent or active; that the removal of this diseased tissue will remove the susceptibility to irritation by these substances; and that the train of symptoms, which appear to be more or less of a constitutional nature, producing the asthmatic and nervous symptoms (which have led to the classification of the affection as a neurosis), is but the result of the irritation of the Schneiderian mucous membrane, which is reflected to other parts and organs through the agency of the sympathetic nervous system, causing irritation in these organs, which is augmented by the consequent obstruction to nasal respiration during the attack.

Covering the inferior turbinated bones and the lower part of the septum there is a highly vascular erectile tissue analogous to the cavernous tissue of the genital organs (Bigelow). This vascular erectile tissue is directly under the control of the vaso-motor nerves, and is exceedingly sensitive to impressions applied not only locally to the part, but to other portions of the body. Often it may be noticed that a draft of cold air striking another portion of the body will cause this tissue to become engorged sufficiently to occlude one or sometimes both nostrils.

Sometimes slight disease or hypertrophy of this tissue, and not sufficient to give the patient any special annoyance, will increase its susceptibility to irritation to a marked degree, and it is the irritation reflected from this tissue, through the sympathetic nerves to other parts and organs, which is the excitor of the varied and distressing symptoms complained of by hay-fever sufferers.

It is proved by experiments on animals that violent irritation of the Schneiderian mucous membrane will induce, through the sympathetic nerves, congestion and irritation in the larynx and lungs similar, though in a less degree, to the derangements induced in the lungs by irritation of the larynx. The conclusion that hyperæsthetic tissue of the nasal passages sustains a certain relation to the causation of hay fever has been reached in a natural manner by observing from time to time that patients who were under treatment for nasal diseases, and who also suffered severely from hay fever during the summer months, were relieved, or their attacks lessened in severity, in proportion as these diseased conditions in the nasal passages were removed; and that in cases where this hypertrophied turbinated tissue was removed altogether, the patient became entirely exempt from subsequent attacks.

It has been observed, furthermore, that in every instance in those who were subject to hay fever, more or less disease or hypertrophy of this tissue existed.

For treatment Dr. Roe recommends the removal of the hypertrophied tissue with galvano-cautery or the Jarvis' snare. For galvano-cautery a small elec-

¹ D. Appleton & Co. 1883.

trode is recommended, burning but little at each introduction. Vaseline warmed and thrown into the nostrils with a spray tube immediately after the operation, and until the slough separates and the parts are healed, will almost invariably prevent inflammatory complications. Aqueous solutions for spray should not be used.

NASAL COUGH AND THE EXISTENCE OF A SENSITIVE REFLEX AREA IN THE NOSE.

Dr. John N. MacKenzie¹ concludes :—

(1.) That in the nose there exists a definite, well-defined sensitive area, whose stimulation, either through a local pathological process or through the action of an irritant introduced from without, is capable of producing an excitation, which finds its expression in a reflex act, or in a series of reflected phenomena.

(2.) That this sensitive area corresponds, in all probability, with that portion of the nasal mucous membrane which covers the turbinated corpora cavernosa.

(3.) That reflex cough is produced only by stimulation of this area, and is only exceptionally evoked when the irritant is applied to other portions of the nasal mucous membrane.

(4.) That all parts of this area are not equally capable of generating the reflex act, the most sensitive spot being probably represented by that portion of the membrane which clothes the posterior extremities of the inferior turbinated body and that of the septum immediately opposite.

(5.) That the tendency to reflex action varies in different individuals, and is probably dependent upon the varying degree of excitability of the erectile tissue. In some the slightest touch is sufficient to excite it, in others chronic hyperæmia or hypertrophy of the cavernous bodies seems to evoke it by constant irritation of the reflex centres, as occurs in similar conditions of other erectile organs, as, for example, the clitoris.

(6.) That this exaggerated or disordered functional activity of the area may possibly throw some light on the physiological destiny of the erectile bodies. Among other properties which they possess may they not act as sentinels to guard the lower air-passages and pharynx against the entrance of foreign bodies, noxious exhalations, and other injurious agents to which they might otherwise be exposed?

Hospital Practice and Clinical Memoranda.

CARNEY HOSPITAL.

SERVICE OF DR. G. M. GARLAND.

PEMPHIGUS PRURIGINOSUS.

THE following case is of interest on account of the rarity of the disease, and because of the mental disturbance which accompanied it:—

November 22, 1881. J. N., a widower, seventy-eight years of age, and a ship carpenter by trade, has always been a hale, hearty man until recently, when he has become weak and prostrated by the disease for which he enters the hospital. About three years ago he noticed small water blisters over the lower part of the sternum, and extending to either side of the same.

¹ American Journal of the Medical Sciences, July, 1883.

The blisters broke and left open sores, which in turn healed slowly. As one blister disappeared, however, another came, so that during this three years the region specified has never been entirely healed.

About ten weeks ago similar blisters appeared on his legs, and from there the eruption spread to his thighs and arms, and was accompanied with great *itching* and *burning*. Patient says he has lost strength and flesh rapidly since this last eruption, and can hardly sleep for the itching. Appetite was good. Urine normal in amount, and also on examination.

Exposure of his body revealed a remarkable state of the skin. His legs and arms were covered with blisters, raw surfaces, and deeply pigmented cicatrices of former blisters.

The blisters varied in size from a pea to an English walnut. They were filled with a straw-colored fluid, and were so tense that on pricking the covering the fluid would spurt out with force. The raw surfaces varied also in size, and were dark red, with a slimy secretion over them. The pigmented spots were very dark colored, and when the patient stood erect those on his legs became purplish. Wherever the intact skin admitted of scratching it was covered with finger-nail excoriations, testifying to the suffering of the victim from itching.

Counting blisters and ulcers, and including a few extra ones which appeared after the patient entered the hospital, his score stood as follows:—

Right leg	75 ulcers.
Left leg	80 ulcers.
Right arm	50 ulcers.
Left arm	45 ulcers.
Front of chest	30 ulcers.
	<hr/>
	280 ulcers.

It will be noticed that the eruption was confined to the legs, arms, and front of chest. At this time the patient's mind appeared clear and rational in every respect. The patient was put on a generous diet, with quinine, and ordered to keep his bed. To protect the clothing from the copious secretion from the sores the affected parts were bathed in a solution of carbolic acid, and then enveloped in large sheets of oiled silk.

The patient, protected from the discharge and resting in bed, was more comfortable, but otherwise no improvement appeared for several days, and new blisters came out. Then the following dressing was adopted morning and night: the sores were carefully and thoroughly cleansed with carbolic wash, and wiped dry; then each sore was dusted with iodoform powder; loose cloths and the oiled silk wrappers were lightly tied around the parts.

December 2d. Patient doing well. The eruption more than half healed.

December 11th. The sores continued to heal satisfactorily, but patient began to show signs of insanity. These symptoms continued to grow worse until December 16th, when he was wild all day and continued in that condition for several days. Patient did not know where he was; tried to escape from the hospital; could not be kept in bed. Five minutes after a hearty meal he would declare that he had had nothing to eat and thought we wanted to starve him. At times he would recognize his physicians and attendants, but at his worst he did not know anybody, and was pugnacious. He tore off his dressings, and finally was removed to a private room with an attendant.

December 17th. Dressings discontinued. Ulcers nearly all healed.

December 18th. Gave bromide of soda in frequent doses.

December 20th. Ulcers reported *all healed*.

December 21st. Appears more rational.

December 23d, 24th. Recurrence of insane symptoms. Threatened his own life.

From this time on he began to improve mentally until January 2, 1882, when he was discharged well.

This was a typical case of pemphigus pruriginosus, which Hebra declares incurable and always fatal. The treatment consisted of rest, in the horizontal position, small doses of quinine, good diet, cleanliness, carbolic wash, and iodoform powder. The rapid improvement in the appearance of the ulcers after the application of the iodoform was noticeable to all who watched the case. Moreover, it was also remarked that *new blisters* ceased to form after the application of the powder, and as we know that iodoform is readily absorbed by raw surfaces, the question arises as to how far the constitutional effect of the absorbed iodoform contributed to this happy result. About a year after treating the above case I noticed a similar case reported by an English physician, which was treated with Fowler's solution, and the reporter of the case claimed that this solution is an infallible remedy for pemphigus.

The success of my own case would indicate that we also have a very reliable remedy in iodoform.

Medical and Surgical Journal.

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CHARITY HOSPITAL, NEW YORK.

In a carefully prepared article the *New York Times* has recently invited public attention to the present excellent condition of Charity Hospital, Blackwell's Island, New York. While fully recognizing the ability of the visiting and resident medical staff, it attributes this in great measure, and apparently with justice, to the marked efficiency of the corps of trained nurses, which is the special pride of the institution, and which will undoubtedly compare favorably with any similar body in the country. In connection with this point it speaks of the very unsatisfactory state of affairs as revealed by public investigation, which has for some time existed at Blockley Hospital, the corresponding institution in Philadelphia, and in consequence of which, not long since, a committee of officials and prominent citizens of the latter city came over to New York for the special purpose of inspecting the system of internal administration carried out at Charity and other hospitals. In 1883, while the death-rate at the Philadelphia Hospital, whose nurses are

described as for the most part ignorant convalescent paupers, was 9.59 per cent., at Charity Hospital it was only 6.06 per cent. While this great difference may be due in part to other causes, there can be little doubt that it is mainly attributable to the superiority of the trained nurses in the latter institution.

One circumstance which must have a very favorable effect on the mortality of Charity Hospital is its admirable situation near the southern extremity of Blackwell's Island, where, with the rushing tide of salt water on either side of the narrow point on which it stands, there is always an invigorating breeze, and as most of the wards have three exposures the most perfect ventilation can be secured. The day that the representative of the *Times* visited the institution the thermometer in the city, directly opposite Blackwell's Island, indicated 92° F. in the shade, while at the hospital at the same hour it registered only 86° F.

There are over a thousand beds in the hospital, and it is rare that any of them are vacant. During the past year 8028 patients were admitted, and of these 530, or 6.06 per cent., died, quite a large part of the mortality being due to phthisis. Of the admissions 4762 were males, and 3206 females; 3096 were natives, and 4932 of foreign birth. In the maternity department the statistics are extremely gratifying. The number of births during the year was 423, and the number of deaths from puerperal causes six, or less than one and one half per cent., while in 1876, with about the same number of confinements, the deaths reached thirty-six. Considering the class of patients that are received into the obstetric wards of such an institution, this is certainly an excellent showing, and affords a marked contrast to the state of affairs in Blockley Hospital, where the mortality among the puerperal patients during the last year is said to have been something frightful. The number of cases delivered by forceps was twenty-five, and with reference to this point Dr. Leaman, the chief of staff of the hospital, says, in his annual report, "The small number of cases where instruments were used, compared with the whole number of patients, is very significant. The process of maternity is so natural and unvarying, in spite of all possible complications, that the law of non-interference may almost be called one of nature's own making."

The large building standing on the extreme point of the island, south of the main hospital, known as the Riverside Hospital, and of late years used for small-pox patients (who will in the future be taken to the new hospital buildings on North Brother's Island in the harbor), will shortly be vacated, and turned over to the Commissioners of Charities for the use of the Training School for Nurses. The school will thus be provided with the most commodious building of any in the United States, or, probably, the world, while the capacity and efficiency of the hospital will be increased, the apartments now occupied by the nurses (which for the most part are immediately adjoining the different wards), being in the future reserved for special medical and surgical cases likely to be benefited by isolation. A long-felt want will thereby be

supplied in the hospital. Another improvement which has lately been inaugurated by the hospital authorities in their efforts to raise the standard of the institution is the exclusion from its wards of the sick from the work-house and other penal institutions on Blackwell's Island. These are now being provided with hospitals for such of their own inmates as require medical treatment.

FIFTY-FIRST ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE fifty-first annual meeting of the British Medical Association was held July 31st and the three following days. The place of meeting this year was Liverpool. The attendance was large, the addresses of fully average interest, and the discussions at the meetings devoted to general business were of an unusually lively, we might fairly say very stormy, character, which tried the patience and parliamentary tact of the presiding officer greatly. An abstract from advance sheets of the address in surgery by Dr. Harrison, of Liverpool, was given our readers three weeks ago, and the last issue of the JOURNAL contained a letter from a correspondent on the spot. The address of the president-elect, Dr. Waters, was a sturdy, cheery, characteristically English production. Dr. Creighton, in the address on pathology, took up for consideration the subject of the specific infections without contributing anything particularly novel or acceptable toward the elucidation of present vexed questions.

The Association continues to grow in strength numerically and financially, and if hearty differences of opinion on various questions of internal regulation is a measure of life and vigor, then is it growing in these respects also.

Belfast will be the place of meeting in 1884, and Dr. Cuming, of that place, was named president-elect.

TUBERCULOSIS A CENTURY AGO.

IN a late number of the *Berliner klinische Wochenschrift* (June 11, 1883) Dr. J. Uffelmann gives a curious and instructive account of a remarkable phase in the history of the study of tuberculosis dating back exactly one hundred years before the discovery of the bacillus of Koch, which there is now so strong a temptation to regard as the specific germ of the disease.

In the year 1782 the medical councilors of the Central Sanitary Bureau of Naples expressed the opinion that tuberculosis was to be regarded as an especially dangerous contagious disease. This council numbered among its members many of the highest medical authorities of the time. In accordance with the opinion of its councilors, based upon the view of the communicability of tuberculosis which these physicians unqualifiedly entertained, the Sanitary Bureau promulgated an order establishing hygienic measures to be adopted against the spread of this disease. This document bears the official date July 19, 1782. In general the decree is as follows:—

(1.) Every practicing physician is ordered to give immediate notice to the bureau of the appearance of consumption — "*l'ulcera polmonale*" — in any patient under his care. For the omission to give such notification he is liable to a fine of three hundred ducats, and for a second offense to an exile of ten years from his native country. (2.) Poor patients who may be afflicted with this disease are to be brought to a hospital designated for this purpose without delay or ceremony. (3.) The directors of hospitals are to keep the clothes and bed linen belonging to the departments containing phthisical patients entirely separate from those intended for use in other departments of the hospital. (4.) The superintendent of each hospital shall keep an inventory of all articles of clothing belonging to patients affected with tuberculosis, and on the death of such patients shall personally compare the inventory and the effects of the patients, to ascertain that every article is accounted for. Any violation of this regulation is punishable by imprisonment or even the galleys. (5.) All articles not supposed to have been infected are to be at once thoroughly cleansed; those articles supposed to be infected are to be immediately burned or rendered harmless in some other satisfactory manner. (6.) The directors are to thoroughly disinfect any rooms or wards occupied by patients with tuberculosis by means of whitewashing, and painting the floors, ceilings, and walls. The doors and windows are to be removed and burned, and replaced by new. (7.) Newly-erected buildings are not to be occupied as dwellings within one year from the date of their completion. (8.) Heavy penalties are attached to the sale of any article of wearing apparel from the effects of a phthisical patient, and the penalty affects the purchaser as well as the seller.

These unusually rigorous measures, which virtually placed consumption on a plane with the plague, produced, as may well be imagined, the most disastrous results in all classes of society. If the symptoms of tuberculosis appeared in any member of a family, it was looked upon as the greatest earthly misfortune. No amount of money would at length furnish a place of shelter for phthisical patients; the friends of the sufferer were looked upon as carriers of the infection and were sedulously avoided, and entire families thus fell a prey to misery and want. The most outrageous contracts were executed for the renting of dwellings to the sick. Houses in which a patient with phthisis had died could not be sold for want of a purchaser; many of the rich even were plunged into the deepest poverty, and whole families were reduced to beggary.

Dr. Uffelmann quotes De Renzi,¹ who says: "The injury which these unfortunate regulations occasioned and are still perpetuating is truly indescribable." The same writer proceeds to criticise severely the proceedings of the Neapolitan Council, and does not hesitate to boldly assert that they were actuated by entirely mistaken grounds, and consequently arrived at wrong conclusions. De Renzi, however, Dr. Uffelmann thinks, has not accorded entire justice to the opinions of the councilors. The decree was un-

¹ Storia della Medicina in Italia, v., p. 512.

doubtedly the result of clinical experiences of no small value. Even at this early date there was no lack of careful study which, if not absolutely proving the communication of tuberculosis from one parent to the other or from patient to nurse, at least made this appear extremely probable. It was upon these and similar experiences in the lives of these earlier Italian physicians that the regulations of the decree were founded. They were, however, wrong in regarding clothing and furniture as bearers of the contagium. Many of the most distinguished contemporary physicians adopted the views expressed by the Neapolitan Commission, and among them the chief medical officer of Venice, Dr. Paitoni, who induced that government to establish protective regulations in regard to it similar to those of Naples.

In Portugal similar regulations were adopted as in Naples, and in Germany the communicability of tuberculous disease was supported by the observations of writers of weight. The Neapolitan Commission, therefore, by no means stood alone in its theory regarding phthisis.

Regardless of the disastrous effects upon the population, and deaf also to the protest of that portion of the medical profession which did not accept the opinions of the Sanitary Bureau, the Neapolitan government enforced the regulations in regard to tuberculosis with a degree of persistency and severity which has seldom been approached in the administration of law in Italy. It is nevertheless remarkable that notwithstanding this the decree was retained and enforced. In the year 1809 the Sanitary Bureau again asked the opinion of the Medical Council upon the subject of the communicability of tuberculosis; but now the views of the councilors were in no wise alike. The majority could not now support the idea that the disease was contagious; but the older and more notable members of the Council, who constituted the minority, still firmly clung to the opinions expressed by the Council of 1782, and the decree of that year still remained in force. Even as lately as 1848 it was still in existence, and was somewhat rigorously enforced. Since that time it has gradually fallen into disuse, and is now well-nigh forgotten. Uffelmann says that he endeavored, during a visit to Naples in 1880, to gain some information in regard to the manner in which the regulations were carried out, and consulted many most trustworthy and respectable citizens, but found no one who could remember to have observed it in actual practice. It does not appear in the recent code of laws, nor could he find the text of the decree or any official reference thereto.

MEDICAL NOTES.

— It is said that the first edition of a German translation of DaCosta's *Diagnosis* was exhausted in less than nine months from its publication.

— The *Lancet* criticises Sir Henry Thompson's recent lecture on *Fish as Food*, saying that while it was an able summary of the known facts about fish, Sir Henry went too far in his denunciation of the notion

that fish eating increases brain power as a "complete fallacy." It adds: "It has long been perfectly well known to physiologists that the phosphorus theory must be discarded, but it is a fact beyond dispute that fish is a form of food which is easily digested, and proves specially nutritive to the bodies of brain workers. Sir Henry Thompson thinks that the only way it acts is by putting a man's body into proper relation with the work he has to do. This may be quite true, and doubtless is so, but the brain is an integral part of the body. Moreover, it comprehends a considerable number of the most important centres of the nervous system, whence the body as a whole derives its power. Therefore in putting a man's body in proper relation with his work, fish may chiefly act by supplying his nervous system with specially available nutriment."

— The University of Dublin has granted to Dr. George H. Kidd the honorary degree of *Magister in Arte Obstetriciâ*, an honor which seems to meet with universal approval as being worthily bestowed. The public oration of Professor Webb on the occasion of the conferring of the degree is so felicitous that we quote it:—

"Et nunc mihi, Juno Lucina, fer opem! Ingenio parturienti meo adsis, precor; nam celebrandus adest castus ille sacerdos qui cærimonias ac sacris tuis summa cum religione præesse solet. An me ludit insania poetæ?"

"Continuo audite voces, vagitus et ingens
Infantum —

non infantum, ut in inferis,

"Quos dulcis vitæ exsortes, et ab ubere raptos
Abstulit atra dies —

sed quos favente Junone suâ, ad auras produxit Artis
Obstetriciæ Magister ille noster. Illius natalibus affuit
signum synonymum Hædorum — splendor, ut ferunt,
pluvialis, se quod de Danae referet, pluvialis auro.
Arti Obstetriciæ aliquid debemus omnes. Artis præcipuæ magistrum præcipuum salutemus universi."

— The Grocers' Company of England have offered their first quadrennial discovery prize, amounting to \$5000, for the solution of the following problem, suggested, it is said, by Drs. Burdon Sanderson and George Buchanan, Professor Tyndall, and Mr. John Simon: "To discover a method by which the vaccine contagium may be cultivated apart from the animal body in some medium or media not otherwise zymotic, the method to be such that the contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product, after any number of such generations, shall (so far as can within the time be tested) prove itself of identical potency with standard vaccine lymph."

— A correspondent of the *Medical News*, writing from Prague, describes the following remarkable crushing injury: "A man's thorax was caught antero-posteriorly between the bumpers of two cars as he was coupling them. Death was instantaneous. At the autopsy no external injury was seen; several ribs on each side were broken, and the heart was found free in the abdominal cavity, it having been torn from its attachment to the great vessels and forced through a

rent which was made in the diaphragm. It is rather difficult to understand how the violence could have acted so as to produce this result; most probably the man must have been stooping slightly forward when caught."

— We understand that the twelve medical men who have been selected for service in Egypt in the cholera districts by the Foreign Office, with the advice and assistance of Sir Joseph Fayrer, will, on arrival, report themselves to Surgeon-General Hunter, M. D., and place themselves under his orders. They will be paid at the rate of £100 per month, with traveling expenses.

— The JOURNAL has given notice previously of the eighth International Medical Congress to be held in Copenhagen in August, 1884. A list of the officers of the Congress are now furnished, consisting for the most part of members of the profession residing either in or near Copenhagen. The organizing committee give notice that in order that the meeting of so many distinguished medical men whom they hope to see on this occasion may be as advantageous as possible, they will, following the example of the later Congresses, communicate with distinguished men of different branches and of different countries in order to prepare a programme. This programme, as well as the rules, will be forwarded to those who are supposed to take an interest in the work of the Congress, and who might be inclined to participate in it. In order that the programme may be ready as soon as possible the committee would be pleased if communications referring to the work of the Congress were sent to the secretary-general before the next 1st of October, so as to be regarded in arranging the definite programme. The programme and rules will be forwarded as soon as possible to every one qualified to participate in the Congress who within the limited time has announced to the secretary-general his interest in the Congress and his eventual intention of participating in it; if possible, also, which section he chiefly intends joining. The secretary-general is Dr. C. Lange, and the president Dr. P. L. Panum, both of Copenhagen.

— A case in which unpleasant effects followed experiments in hypnotism is reported by Bovin. A young lady attending an evening party, after gazing for some time at a shining button, instead of exhibiting the typical hypnotic condition, became unconscious and remained so for an hour. There existed rigidity of the muscles, narrowing of the pupils, respiration of 40, and pulse of 160. The pulse the next day was still at 120. — *Centralblatt für Nervenheilkunde, etc.*

— Erb, as stated by himself at the annual meeting of the neurologists and alienists of Southwest Germany, maintains his well-known views that ninety per cent. of the cases of locomotor ataxia are traceable to syphilis. In the original hundred cases collected by him eighty-eight were syphilitic subjects. These figures and the conclusion drawn from them having been made the subject of wide-spread criticism, and perhaps even of ridicule, it is interesting to note that

in his second hundred Erb finds ninety-one cases of undoubted specific history.

Rumpf, in the same meeting, reports a death from spinal hæmorrhage following nerve stretching in a case of sclerosis. Symptoms directly following the operation seem to place the immediate cause of death beyond a doubt, and in consideration of the questionable results of the operation in such diseases this case comes as a timely warning.

— Mr. Robert Rawlinson, C. E., of England, who has had large personal experience of various cholera epidemics in various countries, writes to the London *Times* regarding the special utility of scavenging as being greater in controlling the disease than any other efforts, including those directed to the water supply. He says: "Scavenging and lime washing, if accomplished in time, appeared to prevent even a commencement of cholera, though it raged in close proximity. The case of Newcastle-upon-Tyne and North Shields in 1864 were notable examples. Dr. Headlam Greenhow, who at the time resided in North Shields, and was chairman of the Board of Guardians, on the appearance of cholera in the north of Europe and at Denmark, at once caused all accumulations of filth to be removed, and all dirty houses, yards, and tenements to be cleansed and lime washed. These things were done about one month before cholera broke out in Newcastle-upon-Tyne, where it was very severe. There was unceasing railway and other road communication between the two towns during the entire period. Cases came from Newcastle and died in North Shields, but not a single case originated in that town. So much for cleansing in time. The water supplied in North Shields was brought in from open reservoirs and old stone quarries, unfiltered, and was so dirty that bags of flannel were tied over the taps to strain the water through as it was drawn. At Bilston, where cholera slew one tenth of the population, and all the excreta was thrown into Bilston brook, a tributary of the river Thames, the water of this river was pumped unfiltered for the supply of Birmingham, but though cholera-smitten patients came into the town and died there, not a single case originated in Birmingham."

He concludes by saying: "The purport of these remarks is, not to say that polluted water may not be dangerous, but to show that as remedial measures with respect to water cannot always at once be carried out, scavenging, that is the removal of visible filth from privies, dust bins, stables, cowsheds, and pig-sties, with washing, cleansing, and lime washing, can be carried out; and if these things are done promptly and effectively there is ample precedent for believing that cholera may be prevented."

— *Science*, alluding to the appointment of Dr. H. Newell Martin, professor of biology in Johns Hopkins University, as Croonian lecturer of the Royal Society of London for the current year, says that the Croonian lecture was founded by Lady Sadlier, in fulfillment of a plan of her former husband, Dr. Croone, one of the founders and the first registrar of the Royal Society. By her will, made in 1701, she devised "one fifth of the clear rent of the King's Head Tavern, in or near Old

Fish Street, London, at the corner of Lambeth Hill, to be vested in the Royal Society, for the support of a lecture and illustrative experiment on local motion." For many years past there has been no formal delivery of the lecture. The council of the Royal Society select from the papers presented to them during the preceding twelve months that one dealing with animal motion which they think most noteworthy, and publish it as the Croonian lecture, sending to the author the sum derived from Lady Sadlier's bequest. The amount of money is trivial, but the appointment as Croonian lecturer is a highly prized distinction. The paper by Professor Martin, which is to be printed as the Croonian lecture for 1883, is on the Effect of Changes of Temperature on the Beat of the Heart. It is interesting to note that the first Croonian lecture delivered by Dr. Stuart in 1738 was on the Motion of the Heart.

— This is how they die from decapitation, according to the scientific but ghastly description of Dr. Holmgren in a communication to the Upsala Medical Society (*Revue Médicale* and *Louisville Medical Times*). The observer was present, and made accurate observations at the beheading of two criminals: —

"Three seconds after the decollation of the first of these the eyes were widely open and the pupils contracted; twenty seconds after they commenced dilating, the dilatation being completed in about two minutes, the pupils afterward remained in a state of medium contraction. Twenty-five seconds after decapitation the eyes turned upward and to the right. Reflex movements commenced after forty-four seconds in little twitchings of the muscles of the neck, after which violent contraction supervened; the mouth was drawn downward and to the left, the tongue also seeming deviated to the left. Some seconds later the mouth, which had been widely open, closed slowly, and then, after some slightly rhythmic movements of the muscles of the face, at one minute and forty-four seconds after the execution, complete repose ensued. From the surface of the section of the neck blood escaped with a hissing sound, and in a jet one metre in length, and thirty-five seconds later there was still an intermittent, jerking discharge of blood. No movement was observed in the body after decapitation. At the second execution Dr. Holmgren was placed so as to observe the eyes during decapitation. At the blow of the axe there was no winking of the eyelids, and the culprit had kept his eyes wide open the whole time his head was on the block. After the head had fallen the same phenomena were observed as in the first case, the jet of blood extending to 1.33 metres. The author concludes from his observations that sensation disappears instantly, and that decapitation is consequently not a very painful operation."

— The case to which allusion was made some months ago in the JOURNAL, in which Mr. Timmins, an English vicar, was indicted for manslaughter, having caused the death of a parishioner by the administration of oil of bitter almonds, which he prescribed in the capacity of an amateur doctor, has recently come to trial, and has resulted in the acquittal of the clergy-

man, as was to be expected, there being no doubt of the kindness of the gentleman's intentions. Mr. Justice Day, however, improved the opportunity to read a severe lesson to the accused on the culpability of a clergyman or any other non-medical person undertaking to give medical advice in a case of serious illness. In this connection we may cite another case of home doctoring reported by a correspondent of a contemporary, where a woman, feeling that she needed a cathartic, took on a Friday two of "Schenck's pills." Not getting the desired effect she took "several" more, the number unknown. Saturday she began to take "Atwood's bitters," and took several tablespoonfuls. Sunday she renewed the attack with seven teaspoonfuls of tincture of rhubarb. Monday morning she wound up with ninety-nine homœopathic pills of unknown brand and strength, but supposed from subsequent history to be arsenicum in a non-Hahnemannian potency. Tuesday she died with symptoms of arsenical poisoning.

— Dr. W. S. Playfair, in a letter to the *British Medical Journal*, denies the insinuation of a critic that massage is merely a freak of fashion in medicine, such as mesmerism and homœopathy have been at previous epochs, and asserts that it is a thoroughly scientific remedy, based on good physiology and common sense, the value of which, in properly selected cases, no one who knows anything of the matter can possibly question, and which doubtless, when improperly applied, is capable of doing much injury, as any other powerful treatment, such as mercury or opium, may under similar conditions. He emphasizes the importance of making a correct diagnosis before employing the agent.

— The permanganate of potash pills recommended by Ringer and Murrell for amenorrhœa have the disadvantage that the common excipients are not available by reason of their rapid oxidation by the permanganate. In solution a dose of permanganate is very nauseous. In a tasteless pill it dissolves slowly, and yet can be easily disintegrated; it is, besides, more agreeable to the stomach than in solution. Mr. Martindale recommends (*Pharmaceutical Journal*, January 13, 1883) as a convenient form for administration in pill: Vaseline two parts; paraffine wax one part; melt; stir till cold, and add kaolin, three parts; mix well. This binds the powdered permanganate together, and with a little dexterity the pills may be rolled out without much difficulty and dusted over with kaolin. They may be coated with sandarach dissolved in absolute alcohol and rendered tasteless. Cacao butter may be used as an excipient, but it in time reduces the permanganate, and it is troublesome to manipulate.

— *Science* makes a quotation from *Arch. de Physiol.*, 1883, 582, concerning the function of the crico-thyroid muscle, which is of interest in connection with the experiments of Drs. F. H. Hooper and H. P. Bowditch (see JOURNAL, vol. cviii., page 521). Martel also brings forward some experiments to show that the crico-thyroid, and not the thyro-arytenoid, muscle is par excellence the muscle used in the production of different tones in singing and speaking. The most in-

interesting point of the paper, perhaps is, that he shows, by registering with simple levers, the movements of the thyroid and cricoid cartilages respectively, that when the different chest-notes (from do^2 to do^4) are sounded the thyroid cartilage remains immovable, while the cricoid is brought closer and closer to it as the pitch of the note is raised. In the contraction of the crico-thyroid muscle, or, as he prefers to call it, the thyro-cricoid muscle, the thyroid cartilage is therefore to be considered as the fixed point. The action of the thyro-arytenoid muscle, according to him, is preparatory to that of the crico-thyroid, in that it gives the vocal cords their proper position, and acts as an antagonist to the latter muscle. The length and tension of the vocal cords, however, are governed by the crico-thyroid. This view of the function of the crico-thyroid is supported by the results obtained when the muscle, or the nerve going to it, is divided in the dog, and, among men, by the pathological cases in which there is paralysis of this muscle. The general result in such cases is a pronounced hoarseness, and an inability to sound any but the lowest tones.

— An exchange calls attention to the value of electricity as an adjuvant to other means for establishing or restoring the secretion of milk in puerperal women. When the secretion is absent or scanty, or when it has been suppressed from any cause, in addition to other modes of treatment (suction of the nipple, poultices of leaves of the *Ricinus communis*, etc.), it is well worth while to employ a weak current of electricity. The mammary gland is to be gently compressed between two electrodes consisting of moistened sponges. A mild current passed twice a day, for from ten to fifteen minutes at a time, will materially increase the functional activity of the gland.

— It seems that the book manufacturers dress the outside of their productions according to the profession for which they are designed. We notice that a publisher announces a new work on medical jurisprudence either in medical sheep or law calf. The basis upon which this natural selection has been founded we are unable to discover. The "cloth" naturally appears to belong to the clergy. We are anxious to see to what variety of books will fall the product of that "new industry" in leather which has been the object of gubernatorial investigation in this State during the past winter. It is to be feared that the aphrodisiac action which has been found to exist in this species of integument may lead to its selection to enhance the dangerous influences of such poems as those of Walt Whitman.

NEW YORK.

— Returns to the Railroad Commissioner's office at Albany show that during the six months ending August 1st 160 persons were killed, and 401 injured on railroads in the State.

— A Mrs. Johnson, the wife of a laboring man on a farm at Tom's River, New Jersey, has just given birth to a third set of triplets. The oldest set are not yet eight years of age, and all the nine children are living and healthy. If it is true, as the Psalmist says, that "happy is the man that hath his quiver full of

them," Mr. Johnson's lot in life ought to be a very enviable one.

— The American Dental Association met in the town hall at Saratoga on the 14th of August, when an address of welcome was made by Dr. W. H. Hall, of Saratoga. The annual address was delivered by the president, Dr. F. G. Clark, of New York.

Correspondence.

SEA-SICKNESS AND BROMIDE OF SODIUM.

MR. EDITOR, — The *New York Medical Record* of July 21st contains a criticism on a recent article of mine in the JOURNAL (July 5th) which should not go unnoticed, if for no other reason than because it involves a total misapprehension of the relation of my views to those of the late Dr. Beard. I am spoken of as arguing against the value of the bromide of sodium, as recommended by Dr. Beard, and am said to ignore the very large number of cases where the bromide does give vast relief.

On the contrary, I merely repeat the opinion already emphatically expressed by Dr. Beard himself as the result of his continued and persistent experimentation and inquiry, when I state that the bromide in small doses is of no value. The following quotation from his work is sufficiently explicit on this point:¹ "The failures that come from the use of the bromides in sea-sickness are the result of these two factors: *First*, the beginning too timidly in doses of ten, fifteen, and twenty grains. This is mere playing with the remedy, and does but little if any good with sea-sickness. Anything short of mild bromization is useless. The dose is not to be considered so much as the effect, — *bromization*. *Secondly*, the waiting until sea-sickness appears before the remedy is given. The bromides are to be taken before we step on board, or before sailing," etc.

Again:² "It is not the bromides but bromization that prevents sea-sickness." "Bromides have been used for I do not know how long, or in how many different ways, for the relief of sea-sickness, but without sufficient success to give great encouragement to those who made the experiments. The bromides as such are powerless to prevent sea-sickness; it is bromization, that is, bromides given in such doses and with such frequency, and pushed so far, as to cause certain symptoms, to which the name bromization is applied, that prevents sea-sickness; and it is to that, and not to the use of bromides, that this work refers."

With regard to the large doses necessary to produce this bromization (Beard places the maximum at ninety grains three times a day), it is not their efficacy that I question, but whether we are justified in giving them for a disease generally of so little real moment, and this is the only point in which I find myself at variance with Dr. Beard. Those writers are far more so who claim results from such doses as ten grains three times a day, and such observers should not be quoted as sustaining Dr. Beard's theory, inasmuch as they are only doing what he terms *playing with the remedy*. For example, the *Record* (July 28th) alludes to Mr. T. M. Kendall, whose experience with 200 patients

¹ A Practical Treatise on Sea-Sickness; its Symptoms, Nature, and Treatment. By George M. Beard, M. D. 1881. Fourth Edition, page 34.

² *Ibid.* Addenda, page 73.

leads him to support Beard's views of the efficacy of the bromide, and that in doses of ten grains. Reference to this experimenter's original article, by the way (*British Medical Journal*, July 7th), shows that his experience was limited to one voyage, during which he had 200 patients on whom he tried a large number of remedies, among which he found the bromide the most efficacious, and in doses of ten grains three times a day. He does not state on how many of these patients he used the bromide, nor at what stage of the voyage, so that as scientific evidence his testimony, besides being totally at variance with that of Dr. Beard, amounts to little in itself. It is just this sort of evidence that should, it seems to me, be looked on with suspicion. Where so many travelers take the bromide it is not surprising that large numbers escape sea-sickness, nor that large numbers recover while taking it, and among them many perhaps who have been sicker on previous voyages, but it must be remembered that this is just the sort of evidence on which quack medicines flourish, and a large amount of it is required to rebut the statements of those who have given the remedy a fair trial with a negative result. Now, as Dr. Beard says, large numbers have tried small doses of the bromide with no effect, and since the appearance of his publication many more have done so under the mistaken idea that they were following his directions, and it is this valuable negative evidence which should not be "ignored" in favor of the enthusiastic statements of more fortunate travelers and physicians. It is the usual custom in scientific medicine to give the *post hoc ergo propter hoc* fallacy a wide berth, and to await repeated evidence and counter-evidence before asserting the potency of a remedy; but it is remarkable to what a degree the custom has been deviated from in this case.

The *Popular Science News*, after an appreciative notice of my article, acknowledges that the bromide in small doses is in the majority of cases useless, but suggests that there are various degrees of susceptibility to sea-sickness, and that the small doses may do something for the slightly susceptible. While this is not impossible, and may be worth the trial, the cure of just such cases should be viewed very critically, for where the susceptibility is so slight that relief appears in a short time after a dose of ten grains of the bromide the suspicion must be strong that relief would have appeared in about the same length of time without medication. . . . Respectfully,

G. L. WALTON, M. D.

Miscellany.

GOOD REMEDIES OUT OF FASHION.

In an address on this subject, delivered at the annual meeting of the Metropolitan Counties Branch of the British Medical Association, by the president, Dr. C. J. Hare, late physician to University College Hospital, the lecturer made a strong plea for a return to the use of certain measures, notably emetics and bleeding, which he admitted were formerly, perhaps, abused, but which he considered in their appropriate cases invaluable. He alludes to practitioners who have never used either of these agents, and proceeds to cite cases from actual experience where such measures are necessary. We quote two from the *British Medical Journal*:

"In suffocative bronchitis the effect of emetics is sometimes magical, and by their administration in such cases not only is immense relief given, but I verily believe—I am certain—that lives are saved. You are called to a patient who has been ill a few days, with increasing dyspnoea; she is sitting up in bed (I draw from nature), for to lie down is impossible; she is restless, and tossing about; the lips, and indeed the whole face, blue; the eyes watery and staring; the pulse quick and small; the cough constant; the expectoration semi-transparent and tenacious; over every square inch of the chest, front and back, from apex to base, you find abundance of rhonchi; moist, sonorous, and sibilant ones in the upper part of the lungs, and muco-crepitant or mucous râles towards the bases. Ammonia and stimulants, right and good in their way perhaps, in such a case are too slow in their action; the patient is, in fact, more or less slowly, more or less rapidly, suffocating. An emetic of twenty-two grains of ipecacuanha in an ounce of water is given; in ten or fifteen minutes the patient vomits, and brings up a huge quantity of that tenacious mucus, and the whole aspect of the case is altered; the distressed countenance is relieved; the breathing is at once quieter; and the patient is able for the first time for the past twenty-four hours to lie moderately low in bed, and to get some sweet, refreshing sleep. The patient is, in fact, rescued from the extremest peril, and in this case, and in many similar ones too, I believe, from otherwise most certain death. Of course, in such cases the emetic is not given for its effect on the stomach, but for its collateral effect in mechanically clearing out the enormous amount of secretion which accumulates in the bronchial tubes, and which the patient is otherwise quite incapable of getting quit of; and thus the half-choking, almost asphyxiated, condition is changed for one of comparative comfort, and time is gained for the action of other appropriate remedies. No doubt the secretion may, and often will, accumulate again; and I have not hesitated again in bad cases to repeat the same good remedy; but it is a fact, and a very positive one too, that, quite contrary to what those who have had no experience in the plan suppose, the system rallies instead of being more depressed under the action of the remedy. . . .

"There is a class of cases in which the right heart is engorged with blood; and in which the only hope of rescuing the patient from death is by bleeding. A man of middle age (I again draw from nature) has considerable chronic bronchitis, with some congestion of the lungs, and, like many other unwise persons, he goes to a southern watering place instead of remaining in his room and in a uniform temperature. Becoming worse, he determines to return home, and travels on a cold spring day; his dyspnoea is so much worse on the journey that his friend and the fellow-passengers doubt whether he will arrive home alive; and when his carriage meets him it is with the greatest difficulty he is conveyed to his house and got into his drawing room. You are at once sent for, the message being that the patient is dying, and when you arrive you find that that is the fact. He is sitting in a chair (to lie down is impossible for him), his face is blue and swollen, his lips purple, the eyes suffused and staring, his heavy, gasping breathing you have only too distinctly heard and recognized as you ascended the stairs, and when you see him you find his chest heaving, and each short gasping inspiration followed by a long

wheezing and moaning expiration; his lungs are full of moist sonorous, and mucous and submucous, rhonchi, and scarcely a trace of vesicular respiration is to be heard, and he is pulseless. He looks to you beseechingly, and gasps out, in scarcely articulate words, that he is dying. This is but too true. Now, the treatment for such a condition at the present day is "to pour in stimulants" (though the patient can scarcely swallow). Brandy and water are given, and ammonia, and perhaps ether; then, if the patient live long enough to have them made, mustard poultices are applied to the chest, and to the calves, and to the feet, and the patient is fanned, and the patient dies. Something has been done, but that which true pathology—and, indeed, common sense, unshackled by prejudice, custom, and fashion—would dictate, has been left undone. Appearances have been saved, but not the patient's life.

"The fact is, that here the danger lay in the right side of the heart being gorged with blood, so that it was impossible for its stretched and distended walls to contract and to propel forwards the thick and blackened blood. . . . Relieve that poor oppressed, distended heart and all may be well! Open one of those veins which are, with every systole of the heart, tending to carry more and more blood to this already distended right ventricle, and all may yet be well with your patient. Sometimes this blood-letting, in extreme cases, is no easy matter; it may be necessary, before you can effectually open the vein, to place the patient's arm in warm water, so as sufficiently to distend the vein; and even when the ligature has been efficiently applied, and the vein well opened, you may have to press and squeeze and rub upwards the arm before a drop of the thick and tarry blood will flow. But, when it *does* flow at length freely, oh, what a marvelous change may you see take place!—the breathing becomes quieter, deeper, and less noisy, the haggard face resumes the appearance of tranquillity, the blueness of the skin is replaced by a more natural tint, the pulse becomes more and more distinct, and, in a word, the choked-up heart is set free. This is no fancy picture. Every word is simple truth, and I appeal for confirmation to the memory of every senior member present who recollects the experience of his earlier days, and who can also probably tell you that the after-progress of such cases was sometimes almost miraculously rapid, so that in a few days even the patient might become convalescent."

EASY METHOD OF POSTERIOR RHINOSCOPY.

DR. W. J. WALSHAM (*Lancet*, July 28th), after pointing out the difficulty in many cases of getting a satisfactory view of the posterior nares on account of the interference of the soft palate, describes a device which in his experience greatly facilitates the manœuvre. While it is in some respects similar to the method suggested by some American surgeons, its author claims some advantages, notably that of requiring no instruments. A piece of soft red-rubber tubing, about one eighth of an inch in diameter, is introduced into one nostril, and pushed very gently along the floor of the nose till it presents just below the soft palate. It is then gently seized with a forceps, drawn out through the mouth, and loosely tied across the upper lip to the end protruding from the nose, the elastic tube being stretched just sufficiently to loop upwards and forwards

the soft palate, and draw it well away from the posterior wall of the pharynx. The looping of the palate on one side is often sufficient; but a better view is obtained by passing a tube through the other nostril and looping up the soft palate of that side in the same way. The posterior nares and naso-pharynx can now be examined with the ordinary laryngoscopic mirror with the greatest facility. One hand only is required to hold and direct the mirror (the stem answering the purpose of a tongue depressor), the other hand is consequently free to perform any manipulation or operation that may be required. The tubes serve as a good guide, as they can be followed in the mirror winding round the upper surface of the palate, and so into the respective choanæ. The introduction of the tube causes hardly any discomfort or annoyance to the patient. Care, however, should be taken in passing the tube to let it only just present below the soft palate, as otherwise, if it is pushed further, it may impinge upon the lower pharynx, and is then apt to produce a tickling sensation and desire to vomit. When the examination is finished it is better to withdraw the tube through the mouth rather than through the nose, and when the nasal end is just about to drop into the pharynx to give it a sharp whisk forwards. If it is withdrawn through the nose the mouth end trails along the tongue, causing a tickling of its posterior part.

The advantages claimed for the red-rubber tubing over tapes and narrow bandages are that it is soft, non-irritating, and possesses just sufficient resistance to enable it to be passed through the nose by itself, thus dispensing altogether with the use of an instrument, the passage of which, as, for instance, in plugging the nares, is, as is well known, a source of much discomfort and annoyance to the patient.

PHYSOMETRA.

THE leading article in the current number of the *American Journal of Obstetrics* is by Dr. H. C. Yarrow, on the above subject. The author first describes a somewhat remarkable case of the disease occurring in his own practice, as follows:—

"In the spring of 1872, the writer was summoned by a physician living a short distance from his place of residence to meet in consultation over a patient considered dangerously ill. In the note which was received no particulars were given, the wording being as follows: 'Meet me in consultation at once, and bring with you such instruments as you may need to perform the Cæsarean operation. No time was lost in obeying the summons, and the patient's dwelling was reached within a brief period. Her medical attendant stated that he believed gastrotomy was imperatively demanded, as she was pregnant, and had gone four months over her time, and as expulsive pains had been felt he feared a rupture of the uterus. The patient was seen, and proved to be a stout negro woman of about forty-six years of age, according to her own statement, and was probably, as she supposed, near the menopause. The patient herself declared she was certain of being with child, as she had borne children before, and was familiar with all the symptoms. She asserted positively that quickening had taken place about the end of the fourth month; her physician was also sure as to her condition, as he had felt the child. An

inspection revealed the abdomen enormously enlarged, the tumor extending far above the umbilicus; there was also considerable lateral enlargement; the breasts seemed full, the nipples pointing. Percussion, however, seemed to negative the other signs of pregnancy, for resonance was discovered over the entire area of the tumor, and auscultation failed to detect the fetal heart beat or the placental souffle. Her attending physician was asked to withdraw, and the statement was made that the woman was probably not pregnant, which remarks were greeted with a pitying and incredulous smile. It was then suggested that a vaginal examination should be made, and that no harm could result under the circumstances from the introduction of a uterine sound. This was agreed to, and, returning to the patient's room, a speculum was introduced, through which the writer passed a sound. Some difficulty was experienced in reaching the external os, and a considerable degree of force was used in passing the internal os, when, to the amazement of all concerned, there was a rush of pent-up gas in the operator's face, which was most sensibly felt, and which lasted probably not less than half a minute. This air or gas was entirely devoid of odor. For a few moments neither the physician nor the patient could be made to believe that the trouble was over, but a view of the abdomen dispelled all further illusions. A more careful vaginal examination showed that the cervix had been the seat at one time of extensive inflammatory action, and the cicatricial tissue had probably occluded the orifice of the uterus. There was absolutely no information that could be obtained from the patient that would lead to any explanation of her curious condition. She had always been a healthy woman, and remembered no miscarriages within quite a long time; in fact she was not sure she had ever had one, and had never been ill with the exception of 'womb trouble,' for which she had been treated by my professional brother."

A large collection of other cases, considering the rarity of the affection, is made from medical literature. In general they may be said to represent two forms of the disease, one, like that of the author, which by an accumulation of gas due to an occlusion of the os, usually from old inflammation, comes to simulate pregnancy, and the other, which discharges the gas from time to time, causing no great dilatation of the uterus, but giving excessive annoyance from the crepitus produced, so that its victim is obliged to forego society altogether.

Regarding the cause of this singular malady, little seems to be definitely established. The author inclines to the belief that the gas is a morbid secretion from the uterine mucous membrane, citing the authority of Dalton, that every organized tissue has the power of absorbing oxygen and exhaling carbonic oxide. In certain cases where the gas has been fetid there is reason to believe that it has been due to the decomposition of retained decidua membranes or other effete products of the uterus. Dr. Charles D. Meigs is cited as believing that this is the only way in which any gas can be generated within the uterus, he scouting the idea of there being any secretion of gas by the lining membrane of that organ. This latter authority adds that air may be drawn into the womb by suction from without, as that viscus relaxes after expelling clots or other debris in the early part of the puerperium. This is the only condition under which Dr. Meigs ad-

mits that any other than a fetid gas can occur in the uterus. Dr. Yarrow admits this piston-action of the uterus after labor, but considers that phenomenon wholly inadequate to explain such cases as that of his. His theory of secretion is the one held apparently by a majority of those who express any opinion on the matter.

PRESYSTOLIC MURMURS, ORGANIC AND INORGANIC.

In the *Practitioner* for June are quoted some observations on the organic and inorganic causes of presystolic mitral murmurs from Dr. A. E. Sansom, in his Lettsomian lecture on mitral stenosis. He describes the two principal forms of contraction, — the commoner button-hole variety, in which the adherent valve segments viewed from above form a flat, hymen-like surface, presenting a narrow transverse chink at the centre, and the much rarer "funnel mitral," a hollow cone with a round orifice at the summit projecting into the ventricle. He holds, therein differing from Balfour, that the murmur is not necessarily associated with the final auricular contraction, but, though intensified by this, may be and often is produced by the mere force of friction of the inflowing blood during *diastole* after being pent up in the resilient left auricle and pulmonary veins. In support of this view he relates a case in which a presystolic murmur from stenosis co-existed with a left auricle lined with clot, so as to render contraction of its wall impossible. He also urges as another proof the fact that the murmur of the mitral stenosis is often more strictly diastolic than presystolic. In such cases it is very difficult to diagnose from diastolic aortic murmur, especially when the latter is best heard at the apex of the heart. Another possible source of fallacy is friction from pericarditis over the auricles.

Contrary to the general teaching that this murmur is always conjoined with disease of the mitral valve, Dr. Austin Flint cites cases to show that a presystolic mitral murmur may occur with a healthy mitral valve. In these cases the left ventricle was dilated and hypertrophied; the mitral valve, post mortem, normal and competent, and the coronary arteries narrowed. A systolic murmur existed along with the presystolic. He explains the latter thus: The curtains of the mitral valve are pushed up and apposed, though not firmly, by the blood flowing in from the left auricle during ventricular diastole. Then follows auricular contraction, causing a jet of blood to fall on the central point of the apposed curtains, producing vibration of these and consequent presystolic murmur. He compares this to the vibration of the lips when a current of air is sent through them. He considers gradual disappearance of such a murmur a bad omen, probably indicative of loss of power in the auricular wall.

URINARY CASTS OUTSIDE OF BRIGHT'S DISEASE.

In *Lyon Medical* (July 22, 1883) we notice a report of some cases in which casts were found in the urine of individuals suffering from acute non-renal diseases, in whom an autopsy supplemented by microscopical examination confirmed the entire absence of any lesion of the kidneys. The first was a man of fifty-one years, deaf, who had pneumonia. The urine

was bloody, with a considerable quantity of albumen. The autopsy showed, besides lobar pneumonia, chronic endocarditis without valvular insufficiency, atheroma of the aorta, and a slightly cirrhotic liver. The kidneys were absolutely healthy macroscopically and histologically. During life the urine, examined at first without coloration, showed besides red blood globules in considerable quantity hyaline casts, very transparent, quite short, some covered with little granular deposits of epithelial detritus. The examination of the sediment stained with picro-carmin and osmic acid showed the same casts in great numbers, some absolutely hyaline, others more or less covered with granular matter.

A second patient was a man who also died of double pneumonia. The kidneys, normal in gross appearance, presented no noticeable lesion of the epithelium microscopically. During life his urine, normal in color, had shown a large disk of albumen. Microscopically, without staining, there were found in the urine numerous waxy and granular casts. The sediment, after staining,

showed also many casts, some almost perfectly transparent, others formed of granular matter more or less dense, yellowish, and sometimes slightly rose-colored.

Other cases are cited where no autopsy was had on account of the recovery of the patients, but where the author believes from the subsequent history that no renal lesion existed. One was of aortic insufficiency and cardiac irregularity with transitory albuminuria. A few waxy casts were found, but no granular ones. Another man who had acute bronchitis with tricuspid regurgitation and œdema had many casts in the urine, mostly transparent and homogeneous, but some with fissured edges, and others granular. In both the cases the albuminuria rapidly disappeared, and the patients were discharged cured.

In view of the interest attaching to such cases, it is to be hoped that further investigations will be made in a sufficient number of instances to cast further light on the question of tube casts in individuals not having Bright's disease.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 11, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	662	294	38.35	13.65	25.05	2.10	4.65
Philadelphia.....	846,984	418	211	29.44	9.66	17.71	2.53	5.75
Brooklyn.....	566,689	314	172	29.76	10.20	23.04	.64	2.88
Chicago.....	503,304	263	170	41.42	5.70	27.36	4.18	5.70
Boston.....	362,535	243	135	40.18	14.76	31.98	1.23	2.05
St. Louis.....	350,522	163	77	28.20	12.87	18.39	3.07	3.69
Baltimore.....	332,190	179	92	37.05	14.82	20.52	2.28	7.98
Cincinnati.....	255,708	85	31	18.88	20.06	11.80	1.18	—
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	94	47	27.56	15.90	22.26	1.06	—
Pittsburg.....(1883)	175,000	63	32	42.89	6.28	17.27	9.00	7.85
Buffalo.....	155,137	71	35	46.53	11.28	31.02	2.82	4.23
Milwaukee.....	115,578	69	54	31.90	8.70	24.65	—	4.35
Providence.....(1883)	116,755	47	21	44.73	4.26	40.47	—	—
New Haven.....(1883)	73,000	32	19	40.69	9.39	28.17	6.26	—
Charleston.....	49,999	36	16	25.00	27.77	22.24	2.77	—
Nashville.....	43,461	16	2	25.00	12.50	25.00	—	—
Lowell.....	59,485	31	14	32.25	16.15	16.15	9.69	6.46
Worcester.....	58,295	31	16	45.22	16.15	35.53	—	3.23
Cambridge.....	52,740	23	12	47.85	17.40	43.47	—	4.35
Fall River.....	49,006	27	11	40.81	14.84	43.47	—	4.35
Lawrence.....	39,178	15	9	33.33	13.33	20.00	—	6.66
Lynn.....	38,284	18	9	44.44	—	27.77	—	5.55
Springfield.....	33,340	8	1	25.00	—	12.50	—	12.50
Salem.....	27,598	12	4	—	—	—	—	—
New Bedford.....	26,875	16	8	50.00	—	50.00	—	—
Somerville.....	24,985	—	—	—	—	—	—	—
Holyoke.....	21,851	13	5	23.07	7.69	23.07	—	—
Chelsea.....	21,785	12	8	16.66	—	—	—	8.33
Taunton.....	21,213	8	3	—	25.00	—	—	—
Gloucester.....	19,329	10	6	—	—	—	—	—
Haverhill.....	18,475	11	5	54.54	—	45.45	9.09	—
Newton.....	16,995	5	4	60.00	—	40.00	—	20.00
Brockton.....	13,608	8	5	37.50	12.50	37.50	—	—
Newburyport.....	13,537	6	2	33.33	16.66	16.66	—	—
Fitchburg.....	12,405	4	2	25.00	—	25.00	—	—
Malden.....	12,017	6	4	33.33	16.66	33.33	—	—
Eighteen Massachusetts towns.....	147,018	57	23	35.00	15.75	29.75	3.50	—

Deaths reported 3076 (no report from New Orleans): under five years of age, 1559: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 1074, diarrhoeal diseases 743, consumption 370, diphtheria and croup 123, lung diseases 111, typhoid fever 71, scarlet fever 42, whooping-cough 28,

malarial fevers 19, cerebro-spinal meningitis 18, measles 16, erysipelas five, puerperal fever four, small-pox four, typhus fever one. From scarlet fever, Boston eight, Philadelphia seven, Chicago six, Brooklyn five, New York four, Baltimore three, Pittsburg, Buffalo, and Milwaukee two each, St. Louis, Cincinnati and Chelsea one each. From whooping-cough, New York

seven, Brooklyn, Chicago, and District of Columbia four each, Philadelphia, Cincinnati, and Lynn two each, Baltimore, Pittsburgh, and Providence one each. From *malarial fevers*, New York 12, Baltimore three, St. Louis, Cincinnati, Buffalo, and Springfield one each. From *cerebro-spinal meningitis*, Boston four, New York, Baltimore, Buffalo, New Haven, and Lowell two each, Cincinnati, Worcester, Newburyport, and Spencer one each. From *measles*, New York 10, Baltimore two, St. Louis, Pittsburgh, Worcester, and Lawrence one each. From *erysipelas*, Philadelphia two, New York, Chicago, and St. Louis one each. From *puerperal fever*, Brooklyn, St. Louis, Buffalo, and Providence one each. From *small-pox*, Philadelphia four. From *typhus fever*, New York one.

Seven cases of small-pox were reported in St. Louis; scarlet fever 37, typhoid fever 31, diphtheria 22, and measles five in Boston; scarlet fever 10, and diphtheria six in Milwaukee.

In 34 cities and towns of Massachusetts, with an estimated population of 1,061,441 (estimated population of the State 1,922,530), the total death-rate for the week was 25.72 against 26.53 and 28.43 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending July 28th, the death-rate was 20.1. Deaths reported 3325: acute diseases

of the respiratory organs (London) 161, diarrhoea 413, measles 114, scarlet fever 90, whooping-cough 58, fever 40, diphtheria 20, small-pox (London six, Birmingham, Liverpool, and Newcastle two each) 12. The death-rates ranged from 10.6 in Birkenhead to 25.5 in Manchester; Blackburn 13.9; Bristol 15.4; Bradford 15.8; Wolverhampton 16.2; Birmingham 18.6; Sheffield 19.4; London 21.2; Leeds 21.3; Liverpool 25. In Edinburgh 17; Glasgow 21.7; Dublin 21.8.

For the week ending July 21st, in 168 German cities and towns, with an estimated population of 8,674,730, the death-rate was 32.8. Deaths reported 5477; under five years of age, 3523; diarrhoeal diseases 699, consumption 529, lung diseases 310, diphtheria and croup 138, measles and röteln 106, scarlet fever 70, typhoid fever 62, whooping-cough 50, puerperal fever 17, small-pox (Heilbronn four, Frankfurt a. M., one) five. The death-rates ranged from 14.7 in Lubeck to 52.6 in Berlin; Königsberg 36; Breslau 42; Munich 36; Dresden 31.5; Leipzig 36; Hamburg 23.4; Cologne 36; Frankfurt a. M. 26.9; Strasburg 31.6.

The meteorological record for the week ending August 11th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
August, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean,	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 5	29.965	67	76	59	68	40	63	57	W	W	W	15	18	16	C	F	C	—	—
Mon., 6	30.035	68	78	52	60	31	48	46	W	W	NW	11	16	11	C	C	C	—	—
Tues., 7	30.161	70	82	55	58	32	59	50	W	W	W	9	8	9	C	C	C	—	—
Wed., 8	30.129	70	85	59	68	37	70	58	W	SE	SW	6	7	8	C	C	C	—	—
Thurs., 9	30.138	66	74	60	78	72	90	80	NW	SE	0	4	5	0	H	H	C	—	—
Fri., 10	30.115	64	70	60	87	76	84	82	NW	E	N	4	7	7	G	H	C	—	—
Sat., 10	30.070	66	74	59	81	50	84	72	NE	NE	N	7	15	6	C	O	F	—	—
Means, the week.	30.079	67.3	85	52				63.6										—	—

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM AUGUST 10, 1883, TO AUGUST 17, 1883.

BAXTER, JEDEDIAH H., chief medical purveyor U. S. Army. To proceed to San Francisco, California, via St. Louis, Missouri, on public business connected with the Medical Department, and on completion thereof will return to his station. Paragraph 1, S. O. 185, A. G. O., August 11, 1883.

MCPARLIN, THOMAS A., lieutenant-colonel and assistant medical purveyor. Relieved from duty in charge of the purveying depot in San Francisco, California, to take effect September 1, 1883, and will then proceed to New York city and relieve Assistant Medical Purveyor Ebenezer Swift of the charge of the purveying depot in that city. Assistant Medical Purveyor McParlin will transfer all funds and public property in his possession to Medical Storekeeper Henry Johnson, who, until further orders, will perform the duties of acting assistant medical purveyor at the purveying depot in San Francisco. Paragraph 5, S. O. 183, A. G. O., August 9, 1883.

BARNETT, RICHARDS, captain and assistant surgeon. Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 2, S. O. 149, Department of the East, August 10, 1883.

BURTON, HENRY G., captain and assistant surgeon. Relieved from duty at Fort A. Lincoln, D. T., and assigned to duty at Fort Assiniboine, M. T. Paragraph 1, S. O. 141, Department of Dakota, August 11, 1883.

BANISTER, JOHN M., first lieutenant and assistant surgeon. Relieved from duty in the Department of the Missouri and assigned to duty in the Department of the East. Paragraph 5, S. O. 183, A. G. O., August 9, 1883.

BENHAM, R. B., first lieutenant and assistant surgeon. Relieved from duty at Fort Assiniboine, M. T., and assigned to duty at Fort A. Lincoln, D. T. Paragraph 2, S. O. 141, Department of Dakota, August 11, 1883.

CARTER, WILLIAM F., first lieutenant and assistant surgeon. Relieved from duty in the Department of Texas and assigned to duty in the Department of the East. Paragraph 5, S. O. 183, A. G. O., August 9, 1883.

KANE, JOHN J., first lieutenant and assistant surgeon. Relieved from duty in the Department of the Missouri and assigned to duty in the Department of the East. Paragraph 5, S. O. 183, A. G. O., August 9, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING AUGUST 18, 1883.

BRIGHT, GEORGE A., surgeon. Temporary duty at Naval Rendezvous, Philadelphia, Pa.

NEILSON, JOHN L., surgeon. Temporary duty on board Receiving Ship Franklin, Norfolk, Va.

MARTIN, WILLIAM, assistant surgeon. Navy Yard, Pensacola, Fla.

BOOKS AND PAMPHLETS RECEIVED.—Twenty-Eighth Annual Report upon the Births, Marriages, and Deaths in the City of Providence for the Year 1882. By Edwin M. Snow, M. D., Superintendent of Health and City Registrar. Providence, 1883.

The Medical and Surgical Directory of the State of Iowa for 1883-1884. By Charles H. Lothrop, M. D. Clinton, Iowa 1883.

Original Articles.

CONGENITAL DISLOCATION OF THE HIP.¹

BY ABNER POST, M. D.

CONGENITAL dislocation of the hip is by no means a common affection, though probably not so rare as has been supposed. I have some scanty notes of four cases which I have seen within the past two months, and have previously seen others, of which my remembrance retains no striking difference from the later cases. In each case the diagnosis has been confirmed by competent observers, and I propose to give a few observations upon the subject, based upon my own cases.

Of these four cases, three were seen at the out-patient department of the Children's Hospital, the fourth was seen with Dr. Bradford through the kindness of Dr. Leonard.

My notes were taken in haste and are very imperfect, but are given for what they are worth.

The cases mostly dwelt upon in the books are those of dislocation of both hips. All my cases were of one hip only. The double dislocation has naturally attracted more attention than the single lesion, though, to my mind, the single dislocation is the more important, as offering less striking points for diagnosis, and being therefore more easily overlooked. The importance of the subject lies in great measure in the diagnosis from hip disease, for which it is liable to be mistaken.

Of these four cases three were born with head presentation. In one of the cases some accident was said to have happened to the child at birth, and a leg was encased in plaster on the following day, but it is solemnly asserted that the plaster was applied to the leg now found to be normal. Another case was a forceps delivery. Nothing abnormal beyond this was found in any of the cases during early babyhood. No history was obtained of any particular deformity or sensitiveness during that period. In the case in which attention had been drawn particularly to the legs anything unusual would probably have been noticed; the other cases belonged to families in which the powers of observation were less educated, and in one case, on account of the imperfect knowledge of English on the part of the parents, no definite history was obtained. All the cases were thought to have been a little late in walking, and a limp was noticed from the first. All the children when seen were healthy, though one was certainly not robust. In each child the leg was decidedly shortened; in one girl of eight years the shortening was over two inches, and they all walked with the limp due to such a difference in the length of the limbs; in no case was there decided eversion or inversion noticeable in ordinary walking.

On stripping the children and placing them on the table no special deformity or wasting was noticeable beyond the shortening and the prominence of great trochanter and the lordosis; flexing hips and knees showed the tibiae to be of equal length and the shortening to be confined to the femur; the fingers on the great trochanters showed that on the affected side to be decidedly raised; a line drawn from the anterior superior spine to the tuber ischii (Nélaton's line) passed below the trochanter. Motion at the hip was in three of the

cases free, the fourth case I shall mention separately. There was none of the limitation of motion found in morbus coxæ; it was motion at the hip and not movement in the lower vertebrae, and was freer than usual, save in abduction; abducting the leg a decided resistance was met; motion took place, however, at a point nearer the sacrum apparently than on the sound side. Absorption of the head of the femur seemed to have taken place in some of the cases, at any rate it was not always possible to distinguish it.

The children were brought for consultation because of the fears excited by the limp rather than for any suffering on the part of the child, though one of them suffered from wandering pains in the back and legs, and was easily tired. Generally some suggestion of hip disease had served to augment the parent's anxiety.

The fourth case was two years old. Her birth was instrumental head presentation. She began to walk at eighteen months, and was lame from the first. During the past summer (1882) she was said to have had abscesses on her back, but no scars remained. During the last summer she also had a fall of some severity, but it had caused no change in her walking. The mother complained that the child slipped and fell on the slightest provocation, and even on the smooth floor. There was no pain or other symptoms. She walked with a well-marked limp, and the trochanter could be seen to move up and down with each step.

Stripping the child showed atrophy of the leg and prominence of the great trochanter, which was above Nélaton's line. When she was suspended by the shoulders there was marked eversion of the foot. Examination showed marked freedom of motion at the hip-joint, and at times a smooth cartilaginous slip like that of a bone in and out of its socket. It was not easy to determine whether this was the head of the femur slipping in and out of the acetabulum or slipping over an imperfect new socket, but it brought within reach a process which felt like an imperfect head of the femur. The position of the trochanter seemed to negative the supposition that this imperfect head slipped in and out of the acetabulum. All examinations were made unusually difficult by the determined resistance of the child; and as she was expected to enter the hospital, where examination could be made at leisure, prolonged attempts to gain more accurate data were postponed.

This case is especially interesting as showing that cases are not uniform. It was the only case in which the slip of cartilage could be felt.

This child presented opportunities for treatment not presented by the others. If it returns for treatment an attempt will be made to return the head to its proper position, or, that failing, to adjust a retentive apparatus which shall prevent it slipping about, which is the cause of the frequent falls.

In the other cases the only treatment attempted was the use of a high shoe, which in the case mentioned as complaining of pain in the back, etc., was instrumental in relieving that pain, and in making locomotion very much less fatiguing.

It is certain that many cases have been greatly improved by treatment. It is equally sure that a time comes when all attempt to reduce the deformity is unavailing.

This trouble is said to be often hereditary. Evidence on this point was not sought, but the mothers were all seen and none of them were lame. A very large majority of recorded cases are female. On the

¹ Read before the Surgical Section of the Suffolk District Medical Society, March 7, 1883.

point of sex my memory allows me to add two cases to the four mentioned. Of these six cases five were girls.

The secondary effects of the lesion demand notice as they may be very serious. Lateral curvature of the spine may follow this as it does other lesions which cause inequality in the length of the limbs. An unequal development of the pelvis follows the single rather than the double dislocation.

These cases are always dislocations upon the dorsum. It is in that position that the head, or whatever remains of it, is felt. Other varieties of congenital dislocations of the hip have been reported, but only in children otherwise deformed, and ordinarily in monsters. Congenital dislocations of other joints sometimes occur, but with these we are not concerned.

The origin of the trouble is uncertain and its consideration is very interesting. Many hypotheses have been advanced. The first and most obvious is that they result from violence during parturition. It would seem that such an occurrence might readily take place during birth with a breech presentation when the use of the blunt hook or even of the fingers might have a tendency to draw the head of the femur out of the acetabulum. The position of the head of the femur when the thighs are strongly flexed would be the most favorable for its escape from its socket, but the writer in the *Dictionnaire de Médecine* has found it impossible after many trials to cause the dislocation in this manner, and it is not easy to see how such an accident could be caused during birth by the head presentation. Violence to the mother previous to parturition, a blow being transmitted through the uterine walls to the knees of the child, or the contractions of the uterine walls acting in the same manner, has been adduced as a cause. The position of the fetus in utero with the thighs flexed upon the abdomen brings the heads of the femurs in contact with the posterior and inferior portion of the cotyloid cavity. At this stage of development it will be remembered that the cotyloid cavity is exceedingly shallow, and the seat of union of the thin bones of the pelvis, and offers much less resistance to the exit of the bone from its cavity than later in life.

Dupuytren advanced the idea of an original vice of conformation depending upon the original constitution of the germ.

Borschet refers this luxation to an arrest of development in the cotyloid cavity.

Intra-uterine joint disease is another theory which was advocated by Paré and by others since his day. It is highly improbable, however, that any process similar to morbus coxarius, as seen in children after birth, could take place without, in some cases, leaving traces of the inflammatory process and a stiff joint behind it.

Carnochan, who is the author of a very complete monograph on the subject of Congenital Dislocation of the Hip, believes in a perverted condition of the excitomotor apparatus of the medulla spinalis. In his somewhat lengthy argument upon the subject he says: "I should say, then, that the congenital displacements occurring at the ilio-femoral articulation result from active morbid muscular retraction; that morbid muscular retraction itself is to be traced to a morbid condition of the central ganglionic mass of the cord, and that this pathological condition is either located in the ganglionic mass or conveyed thither by the incident-excitor nervous influence of the excitomotor apparatus of the medulla spinalis."

It is not necessary to catalogue all the supposed causes nor to suppose that these cases are all the result of the same cause. It is certainly possible that different causes may cooperate to produce the result.

To one acquainted only with the literature of the subject the diagnosis of such cases as have fallen under my observation present certain difficulties. The books dwell particularly upon the double dislocation and upon the presence of the head of the femur upon the dorsum of the ilium. It seems worth while, even at the risk of repetition, to give in detail the diagnostic points of the single dislocation, as my experience leads me to think that its recognition is a problem which may be presented to any one, and which presents no especial difficulties when once the subject is brought before the mind. I dwell upon the diagnosis because the little incidents told by my patients in regard to their search for a diagnosis lead me to believe that it is not ordinarily recognized. One of the cases seen had been told by a distinguished surgeon, now dead, of another part of New England, that the child would outgrow the trouble, and walk all right after a time, a prediction which, of course, has not been verified, and, of course, has not added to the faith of the family in the profession. Children have been leeches, blistered, and cupped, confined to bed, and treated with all sorts of machines through misapprehension as to the nature of the difficulty.

A history of a limp from the time of the first step in a child which began to walk late, the limp increasing as the child grows, and unaccompanied by febrile action or any special pain, should turn the attention to the possibility of a congenital dislocation. If such is the lesion, when the child walks the trochanter may be seen in some of the cases to rise higher towards the anterior superior spine of the ilium as the weight is thrown upon the shorter leg. When the child is stripped and laid upon the table the difference in contour of the legs is not very striking. Squaring the pelvis the limbs lie side by side; there is arching of the back, and marked shortening of one leg. One malleolus rises markedly above the other. The same is true of the inner condyles of the femur. Extension of the shorter leg reduces the difference somewhat, probably not entirely; flexing the knees and thighs as in the sitting posture makes it plain that the difference in length is confined to the femora. The trochanter is higher on the shorter limb, and Nélaton's line shows the trochanter above it. There may be a vacuity in the groin, and the line of the vulva, if the child is a female, may be deflected. Behind the gluteal fold is raised somewhat, but not obliterated, and the line between the nates is deflected.

Examination shows a want of sensitiveness about the hip, and unusual flexibility in the joint save in abduction. If the examiner is looking for decreased motion in the joint, his attention may be concentrated on the sound limb by its relative rigidity.

Abduction is limited in some of the cases. Sometimes, but not invariably, the head of the femur may be felt upon the dorsum or be brought within reach by manipulation.

"When the patient was sick the patient most grateful would be,
When the patient got well the patient disputed the fee."

APOPLEXY OF THE CEREBELLUM.

A CASE IN PRIVATE PRACTICE.

BY E. P. HURD, M. D.

SUBJECT, T. R., aged seventy-five, a retired merchant. *Hereditary Antecedents.* Father, possibly also mother, died of apoplexy at an advanced age.

Previous History. Mr. R. had enjoyed good health till the night of the apoplectic seizure. Had led a quiet and easy life. To oppose a tendency to corpulence he had adopted a milk diet. Never indulging in ardent spirits to excess, he nevertheless took daily, generally before meals and before going to bed, a little whiskey. July 30, 1883, he ate a hearty supper of bread and milk, and drank a little milk and whiskey before retiring. At eleven o'clock P. M. he was found comatose, breathing stertorously, with left-sided hemiplegia, and right facial paralysis (crossed paralysis). Dr. F. A. Hale, of this city, was summoned, but could do nothing. There was the most profound coma, with relaxation of all the members, contraction of the pupils, paralysis of deglutition, weak, irregular pulse, and marked Cheyne-Stokes respiration. The heart's action became more and more faint, and in five hours from the inception of the attack death ensued.

Autopsy twenty-four hours after death. There were present Drs. Hale, Bolton, and myself. Only the encephalon (by request of the family) was examined. General vascular engorgement of the meninges and substance of the cerebrum. Blood-vessels of the circle of Willis seemed healthy. Venous sinuses all full. Otherwise there was nothing worthy of note till the tentorium was removed and the cerebellum examined. The right hemisphere of the cerebellum contained a large clot, which had excavated for itself a place, and had effected complete disorganization of the nervous substance. The weight of the clot was estimated at two ounces. The subjacent portions of the medulla and pons presented an intensely congested appearance. Superiorly the clot extended in the form of a thin, firm layer over the whole of the right hemisphere and superior vermiform process to the other side; inferiorly and to the right it followed the middle peduncles to the pons, where it stopped, involving the origin of no nerves except the seventh pair, which was found imbedded in the clot and thoroughly disorganized. On examining the arteries the occipitals and the basilar were found to be intact, but the right superior cerebellar and all its branches were filled with recent coagula which extended almost from the junction of this artery with the basilar into the right hemisphere of the cerebellum. This gave probability to the supposition that the hæmorrhage had proceeded from a small branch of the superior cerebellar in the cerebellum; all the arteries of this region, moreover, were markedly calcareous.

The involvement of the portio-dura in the clot of the right side explained the occurrence of the right facial paralysis. The situation of the large clot in the cerebellum contiguous to and pressing upon the *right motor strands* of the pons and medulla explained the left-sided hemiplegia. The propinquity of the medulla oblongata with its important cardiac and respiratory centres and the fatal embarrassment to the functioning of this part of the cerebro-spinal axis occasioned by the lesion were sufficiently obvious facts.

Hæmorrhages into the cerebellum are comparatively rare forms of apoplexy. On looking over files of the

Boston Medical and Surgical Journal of the past twenty-five years I have not been able to find recorded a case. Bastian, in his useful work on Paralysis from Brain Disease, hardly alludes to it, but in an interesting lecture published in the *Lancet* for 1878 he treats of the subject quite fully. When the hæmorrhage is extensive there will always be hemiplegia on the opposite side, not in consequence of lesion of the cerebellar tissue, but from pressure on the corresponding side of the pons and medulla. If the hæmorrhage be trifling there may be no paralysis or even coma; cephalalgia and vomiting are then prominent symptoms.

Luy's¹ reports several very interesting cases which were characterized by sudden loss of consciousness, with hemiplegia on the opposite side to the lesion, death speedily ensuing.

REPORT ON MATERIA MEDICA AND PHARMACY.

BY WILLIAM P. BOLLES, M. D.

ABSTRACTS.

DR. SQUIBB is publishing in his *Ephemeris* a long and careful criticism upon the new Pharmacopœia, four installments of which have already appeared, and are full of sound observation, and rich in practical pharmaceutical knowledge. As he takes up the subjects alphabetically, abstracts come in for an early notice, and are not very cordially received, as will be seen by the following quotation: after copying the statement from the preface of the Pharmacopœia that "to supply a demand which has arisen for dry, powdered extracts a new class of preparations has been introduced under the title of Abstracts," the doctor says, "The demand for a class of dry, powdered extracts has, in the writer's experience, not been great, and what demand there was came from pharmacists rather than from physicians. Several powdered extracts have been long in common use, and a few others have been more recently advertised into use, the supply being used to create a demand. There is, however, an undoubted advantage and convenience, or, perhaps, a necessity, for having a few powdered extracts. And for having these to bear an accurate, known relation to the drug, and for having official formulas for such, but whether these abstracts fulfill the conditions in the best way may be doubted." The process by which they are made appears to him troublesome, expensive, and hurtful, and the degree of concentration would have been better if, instead of attempting uniformity by reducing them until they weigh one half as much as the crude article, those which would admit of it had been made three or four times as strong, with a correspondingly less dose. He then examines each one of them with much pharmaceutical detail, and offers for them a substituted process, which must have occurred to most persons who have examined the directions of the Pharmacopœia, namely, evaporating the fluid extracts, and properly diluting, excepting in the case of jalap, where the alcoholic extract is not likely to be injured by the heat, and in those of ignatia, which he ignores, and of podophyllum, which he condemns entirely. The process which he proposes consists (in brief) in taking a small quantity, say thirty cubic centimetres, and spreading it out upon a large surface,

¹ Recherches sur le Syst. Nerv. Cerebro-Spinal, page 581.

that is, a dinner plate, so that it shall evaporate spontaneously in twenty-four or thirty-six hours, then scraping it off, warming a little if necessary, adding the sugar of milk in the proper quantity, and rubbing fine. The abstract of conium, made by the official process, he is almost certain would be inert, and that of valerian "made with great care and with all the skill of which he was capable" was unsatisfactory when compared with the fluid extract from which it was made."

Apropos of the demand for these preparations, in an examination of ten thousand recipes from the files of one of the leading apothecaries of this city, covering regularly distributed portions of a period of two years, ending last July, not a single abstract was called for.

CONVALLARIA MAJALIS.

Considerable attention has been given to this little plant within the past twelve or more months, but the evidence of its great or special usefulness is not yet altogether convincing. It is not by any means new to medicine, and its active principles were separated as long ago as 1858 by Valz. The leaves and flowers as well as the roots have all been experimented with. The observations which gave it its present start, however, were those of Professor Sée, which, although not by any means conclusive, were nevertheless sufficiently interesting to direct considerable attention to it, and cause a repetition of his trials with it, as well as a reëxamination of its chemical characters. The two peculiar principles discovered by Valz, and named convallarin and convallamarin, are both light-colored amorphous powders, both glucosides, and both separable without special difficulty in a state of approximate purity. Of these the first named is inert, or at least does not represent the heart-toxic qualities of the other, and this latter, therefore, as far as we know, must be taken to represent what is valuable in the plant. But neither the chemical examination nor especially the therapeutic value of the drug can be considered as fairly proved, and the principal object of this note is to call attention to it for further trial. No doubt some of the discrepancy of the results of the experiments of different observers is due to want of care or judgment in regard to the time of the year when the roots, etc., were collected, as well as the employment of different parts of the plant. The fluid extract of the root may be given in doses of from five to twenty drops.¹

ICHTHYOL.

An artificial compound obtained by treating one of the products of the distillation of a certain bituminous rock of Seefeld, in the Tyrol, with sulphuric acid. The bitumen is found associated with numerous remains of extinct fishes and other animals, and, according to Professor v. Fritsch, is probably a product of their decomposition. This is rendered plausible by the fact that it contains the basic substances found in bone tar oils. Ichthyol is made by distilling the rock, saving the dark, tarry oil, purifying it, and treating it with concentrated sulphuric acid. A salt is formed which, when freed from the excess of acids, contains ten per cent. of sulphur, and is the product in question. It is a tarry-looking liquid, having a peculiar herb-like odor, a faintly alkaline reaction. It has about the consistency of vaseline, with which it is miscible in all

proportions. It is partially so in ether and alcohol, and wholly so in a mixture of the two. It is recommended as a valuable ointment in cases of chronic eczema, diluted one half or more with vaseline or lard.²

CITRATE OF IRON AND QUININE.

Dr. Squibb sees a step backward in the modern use and some of the modern preparations of this salt. It was originally introduced, according to the doctor's account, to furnish an almost tasteless preparation of quinine; still one that had a large proportion of that alkaloid in it, and one, too, in which it was finally completely soluble. These requirements the citrate of iron and quinine almost completely satisfied. It could be taken as a powder or pill, uncoated, or be mixed with syrup, and taken without repugnance, if administered immediately; while, on the other hand, it is soluble in its own weight of water if time enough is allowed. Instead, however, of taking advantage of these most desirable qualities, it is an undisputable fact that this preparation is now generally given in a very bitter solution, and to render its solubility more rapid citrate of ammonia is often added with the effect of considerably weakening the alkaloidal strength, while it renders the compound readily soluble. Citrate of iron and quinine, then, should be given dry or merely suspended in fluid, and the most insoluble is the best in quality.

PERSIAN OPIUM.

Two consignments of Persian opium were recently received in New York. It came packed in cases of 130 pounds each, in lumps weighing about thirteen ounces each. These lumps were plano-convex, as if they had been round balls flattened when soft by resting upon a flat surface to bake or to dry, smooth, polished, of a dark-brown color, with a brittle "shell" and softer interior. Their texture was homogeneous excepting as just mentioned. Assays were made of the two lots, and showed them to be of excellent quality, the first yielding between ten and eleven, and the second thirteen per cent. of morphia, calculated upon the weight undried.³

— According to the *Medical Times and Gazette* the sign "Ry," which Dr. Holmes has explained as a relic of the astrological symbol for Jupiter, and which as such is not specially flattering to the physician's claim as a devotee of pure science, has received another gloss which can hardly be said to be preferable on this ground to that commonly given. It seems that at the close of the sixteenth century Dr. Dee was, according to his own account, and apparently his own conviction, on terms of intimacy with most of the angels. His brother physician, Dr. Napier, got almost all his medical prescriptions from the angel Raphael, and Elias Ashmole had a manuscript volume of the receipts, filling about a quire and a half of paper. Now it has been thought that the prefixed characters which Ashmole interprets to mean *Responsum Raphaelis*, remarkably resemble that cabalistic-looking "Ry" which is to this day prefixed to medical prescriptions, but is commonly interpreted *recipe*.

¹ Pharmaceutical Journal and Transactions, etc.

² New Remedies.

³ Ephemeris.

Hospital Practice and Clinical Memoranda.

CLINICAL REPORT ON CASES OF LACERATED CERVIX, FROM PRIVATE PRACTICE.¹

BY JOSEPH H. WARREN, A. M., M. D., BOSTON, MASS.

FROM observations of over twenty-five years I have learned that lacerations of the cervix uteri occur much more frequently and extensively on the right side than on the left, but that when both sides are lacerated the left is usually torn more than the right. The most natural question is, Why should this laceration occur so much more frequently and extensively on the right than on the left side, and to this question I can give no other answer than that, in many cases at least, the laceration is due to bad and meddlesome midwifery. I do not mean that the obstetrician should never interfere with the progress of a labor when by such interference he may render the necessary assistance that is all-important to the successful termination of a labor that is already unduly protracted; nor do I mean that the accoucheur should be blamed if in rendering such necessary assistance he consciously or unconsciously lacerates either the cervix or the perineum. A laceration in some cases is probably inevitable, and the fault is no more with the physician than with nature. But there are certain ways of conducting a labor that must be censured by every conscientious practitioner, and it is to these gross mismanagements that I apply the term bad and meddlesome midwifery.

The cause of lacerations in general is a weakened state of the woman's constitution, a child abnormally large for the woman's pelvis, which is often narrow and contracted, the correction of some malposition or malpresentation, or the use of instruments, or in some cases a natural but a too rapid labor. I recall a case which is interesting and instructive in many ways.

Mrs. O. B., of Dorchester, became pregnant with her first child when she was forty-seven years of age. I was called to her June 1, 1857, and found that she had considered herself pregnant for about six weeks. Her history was that on the very next day after connection with her husband she began to complain of nausea and vomiting, so that she could retain nothing either solid or fluid upon her stomach. I attended her almost daily during the whole of her pregnancy, and can rely upon her statement that she was able to retain nothing upon her stomach during all this time, unless, possibly, it might be a little beef or lamb scraped fine and mixed with sugar and champagne. Although she was nourished by injections of beef tea and milk she became much emaciated by the time of her confinement. Her labor was protracted for three days, but at last I succeeded in dilating the os sufficiently to introduce the blades of the forceps and deliver a large and healthy female child. In doing this I lacerated the cervix upon both sides, slightly on the right but pretty extensively on the left, but not extensively enough to require an operation for lacerated cervix. I consider the reason why in these double lacerations the left side is torn more than the right to be that with the woman lying upon her back or left side we are inclined to pull up in making traction upon the forceps, and thereby cause a corresponding depression of the ends of the

blades, which cuts and tears the left side more than it does the right.

Another feature of this case which I will mention is that the patient's nausea and vomiting could be controlled for the space of three or four days by the application of tincture benzoin comp. to the cervix. This can readily be applied by adding to it elastic collodion. The late Dr. Miller, of Dorchester, in his practice used the tincture of iodine for the same purpose, and both his article and my own upon this subject can be found in the Boston Medical and Surgical Journal.

The next case of a laceration of the cervix that I remember was in a labor where the cord had prolapsed. While I was vainly attempting to hang the cord upon some prominent point of the child that I might hope to find, and when I had just succeeded in pushing back the loop within the os, a sharp pain came on, caught my finger in the os, and ruptured the cervix upon the right side. Another laceration took place upon the right side while I was attempting to change an arm and shoulder presentation into a footling, and still another while I was assisting a physician to deliver a dead child with the blunt hook. The hook was introduced on the left side of the cervix, and had caught the left side of the lower maxilla, but the traction was toward the right side of the os, and hence the laceration was upon that same side.

There are, however, two classes of lacerations that are needless, and are due to improper interference, meddlesome if not directly criminal. Some practitioners will try to assist the progress of the labor by helping nature to dilate the os, even when the labor is progressing as rapidly as it ought. By fingering the os they make both it and the vagina hot, dry, and irritable, and if the patient continues to bear down constantly, as they wish her to do, the time will speedily come when the os will tear. If this was caused by ignorance we might hope to root out the evil, but I am afraid it arises in many cases from impatience and willful carelessness. But the most criminal lacerations are those produced by those vipers in the community, the miserable and soulless abortionists. To produce a miscarriage, and to free a woman of the inconvenience of carrying her child, these wretches cut her, and almost always upon the right side of the cervix. Indeed, I believe this injury to be one of the prime causes of death after an attempted abortion, by causing an acute septicæmia, and I think it would be an interesting study for the medical examiners to ascertain what proportion of those dying from abortion have a lacerated cervix. I have sometimes thought it a fit punishment designed by Providence for those who yield to this great sin, and I feel confident that many more lacerations than we now suspect have been caused in this way, even among our American women, for within a short time I have operated on no less than three such lacerated cervixes due to this cause alone.

It often happens that a laceration exists when we little think it, and to show how easily one may fall into this mistake I will relate a case. I saw a lady three times, but could find nothing more abnormal in her as seen through a bivalve speculum than possibly a slight fissure which I should not think of repairing. She went to another medical gentleman, who was so positive of his position that he was willing to take oath that she had no laceration. Finally she went to a distinguished practitioner, who said she had a terrible laceration, and who operated upon her for it. I am

¹ Read before the Suffolk District Medical Society, February 24, 1883.

willing to confess that my diagnosis may have been a mistake, and for the following reason: the last gentleman used a Sims's speculum probably in his examination, which I think was the proper instrument to use. Recently I have made an operation for a lacerated cervix uteri which to the touch would seem to be only slightly if at all fissured, but which on examination with a Sims's speculum, by which the uterus was drawn down, revealed an extensive laceration winding obliquely around the cervix, the edges of the tear being kept in perfect coaptation. Moreover, this is the second case of the same peculiar kind that I have seen and treated within a year, so that I must ask pardon of my good friend for ever doubting his diagnosis in the case I have mentioned.

These lacerations are by no means always the fault of the physician attending the labor, for similar accidents happen with the best of practitioners abroad, both in private and in hospital practice, and will continue to happen so long as women bear children, unless, indeed, future generations develop more physical perfection than is at present known. But it is to American gynecologists that modern surgery has had to look for the diagnosis and treatment of these cases, and this is only a single instance of the homage Europe has had to pay to us. Indeed, I feel proud to say that I believe that medicine and surgery in all their branches, except possibly pathological anatomy (and this through no lack of ability in our professors), are taught as well, if not better, in Boston and Philadelphia, and I might add the schools at Portland and Bowdoin College and some few others, as in any European schools, those of Vienna and Berlin not excepted.

My usual plan in treating lacerations, particularly those of the cervix, is to take stitches pretty closely together in the lips after they have been thoroughly pared and freshened, and to use the animal ligatures for the upper stitches. The last stitches I usually make with fine silk, either black or white. In addition, in all of my late operations, I pass a very fine animal ligature through the edges of the laceration after drawing the pared lips together by silk sutures. I find this materially assists in obtaining perfect union at the extreme end of the laceration. Then I return the parts into their normal position in the vagina, and leave the silk ligatures in their places for ten or twelve days. The animal ligatures will in time become absorbed, but I consider it a great mistake to remove the silk or silver stitches after they have been in place only six or eight days, as recommended by most authors. The tissues of these parts do not heal so rapidly as in other portions of the body, and I have found by experience that better results are obtained if we allow the stitches to remain for twelve or fourteen days. They cause no trouble by remaining this length of time. After forty-eight hours have passed since the operation I have the vagina well washed out night and morning with a solution of carbolic acid or a solution of thymol in glycerine. In twelve or fifteen days the parts will usually be found to be well healed; but if the first operation should not be successful another should be performed after a few weeks or months, or as soon as the constitution of the patient will allow without producing too much depression or shock, for it will be found that very many of our failures in this operation are due to a want of a proper standard of good health at the time of operating. To illustrate my position more

plainly, I will select out of a large number of cases that I have operated and treated for this quite common affection the few following somewhat interesting ones:—

My first case of lacerated cervix uteri was that of a Mrs. T., of Newton, late in the fall of 1853. Mrs. T. had been bedridden for nearly twenty years from what was supposed to be extensive ulceration of the os and cervix. I operated by applying strong nitric acid and packing the parts well around with fine linen tow. We used tow at that time more frequently than cotton in surgical dressing. She made a fine recovery, the lacerated cervix united perfectly. She regained her health so fully that she was enabled to perform all the duties of a housewife, and she remained in good health for years afterwards. This laceration occurred in a rapid childbirth twenty years before, and took place on the right side, which peculiarity will also be noticed in a majority of the cases that follow. They also illustrate the constitutional severity of these lacerations.¹

Mrs. S., of South Boston, aged thirty-two, was confined with a second child six years previous to the time of the operation. The labor was only of four hours' duration,—very rapid, it will be seen. She felt a certain giving away and shock about fifteen minutes before the birth of her child. She said the man called in was so fearful that he would not get through before my arrival that he pulled and hurt her very much, telling her to bear and force down with all her might, and he would help her by dilating the os, which it would seem was most fearfully and rapidly dilated without any such urging or assistance on his part. I arrived just as the child was born. This man in attendance, not a regular physician, skulked away seemingly with great haste. I found the woman bleeding very profusely, so that I was obliged to plug her, and it required no little effort besides on my part to arrest the hæmorrhage.

Her recovery was necessarily very slow, and upon examining her I found that a terrible laceration of the parts had taken place. I told her that this tissue we would repair as soon as she was in suitable health to undergo the operation. I lost sight of her until October, 1881, when, with the assistance of Dr. W. E. Smith and my son, C. E. Warren, I denuded the lacerated parts and secured them together with carbolized animal ligatures for the upper stitches, the two lower being silver. I found it necessary to take eight stitches. The sutures of silver were removed on the twelfth day, when perfect union of the parts had taken place. For the first few days after the operation she had increased temperature, running up as high as 101° F., and on the fourth day the menses made their appearance. The operation was done under antiseptic precautions. I should remark that both lacerated lips were covered with a soft, velvety growth, and the interstices loaded with pus. This was very friable, and easily broken down under the slightest pressure, so that I was obliged, fearing a malignant tendency of the disease, to remove the tissue for some distance till I arrived to where it seemed healthy and sound before I brought the parts together and closed them with sutures. The patient is now in good health, and the appearance of the uterus is like that of a virgin.

The removal of this softened tissue I speak of was

¹ To fully appreciate this affection see Savag's *Anatomy of the Female Organs*.

extremely necessary, as I once before operated on a case where there was a union which lasted for one or two years, but finally all sloughed out, so that the hiatus was even larger than it was previous to my operation, and the parts were greatly degenerated. Finally cancerous affection took place along the track of our former operation, and nothing more of course could be done, but I felt that had I pared deeper and got more sound tissue there would have been less likelihood of this malignant growth appearing.

Mrs. E., aged twenty-five, had her third pregnancy. She applied to a professional abortionist, and he performed an abortion on her by cutting the right side of the uterus from the external os very deep through the neck and into the body of the organ. She suffered two years from ill health, when she consulted me for uterine trouble. She said she had been to the City Hospital, and the physicians there said it was the most extensive laceration they had ever seen. With the assistance of Dr. C. P. Baucroft I operated after denuding the lacerated parts, and secured them together with six silver wire sutures. On the tenth day I removed them, and found perfect union. No great rise of temperature took place, only a slight feverish condition. Injections of carbolic water were used frequently, and administrations were made of ten grains of quinine sulphate per day. She has enjoyed most perfect health since.

Miss L., of Maine, aged twenty-two, became *en-ciente*, and sought relief at the hands of a notorious abortionist in that State. He operated in a similar manner, cutting very extensively the os and cervix, and into the body of the uterus far beyond the junction of the vagina. This was also on the right side, and a fearful laceration. She suffered, too, from pains of a neuralgic character in both ovaries and uterus, extending down the limbs, with bloating of abdomen and legs. Another serious symptom was irritability of the bladder. Her appetite was poor, and she was sleepless at night. Upon examination all the lacerated parts were found covered with a thick, creamy secretion or mucus, and under the slightest touch the little papillæ underneath bled very freely. After proper constitutional treatment with triple phosphates and bromides, she being apparently in a sufficiently healthy condition to warrant an operation, I operated January 5, 1882, with the assistance of Dr. W. E. Smith and C. E. Warren. After thoroughly denuding, the parts were brought together, and silver sutures, used for the first two lower stitches and for the four upper ones silk. For the lower edge of the os a transverse suture was applied, which greatly strengthens those higher up, and also helps to maintain the position of the denuded parts in a far better manner than when this stitch is not applied. In this case menstruation returned on the eighth day, and the removal of the stitches was deferred until the fifteenth, when the parts were found perfectly united.

The next interesting case was that of Mrs. J., aged twenty-seven, her first confinement having been some six years before. She had a very painful, long, and tedious labor. The attending physician perceived an audible fracture of the os pubis. This was owing to a greatly contracted pelvis. She being threatened with great collapse, the instruments were applied, and in delivering her the cervix was lacerated on both sides, the left very extensively, whilst the right was not torn through the crown of the os. In November,

1880, I operated with the above-named assistants, and after paring and making coaptation of the parts, silver and silk ligatures were used, as in many of my former cases. The patient was slightly feverish the first few days, the temperature rising to 101° F. on one day. On the sixteenth day the sutures were removed, and I found perfect union had taken place. She made a rapid and good recovery, whereas she had been almost bedridden, and was unable to take any exercise for six years previous to the operation. She has ever since been enabled to go where she pleased, and perform all the duties of the head of a family. This is the only case of fracture of the os pubis I ever saw that took place at the time of labor, and we can imagine with what force must have been the contraction of the uterus upon the child that pressed against the os pubes sufficiently to cause that bone to give way.

I might mention other cases. One I recall where the laceration, commencing at the anterior portion of the cervix, passed obliquely around nearly to where it began in front, — really a spiral laceration. This case I for some time treated before discovering that the laceration extended above the crown of the os, but upon a thorough examination of the patient on her side with a Sims's speculum I discovered the extent of this rupture.

Whilst seeing somewhere in the neighborhood of 450 cases of laceration, besides the number that I have already reported, it is astonishing how many of these ruptures require little if any treatment, as the rupture does not extend through the tissue to the crown of the cervix, and will generally heal and the parts become as sound and healthy as any other portion of the tissue comprising the os; but when this laceration extends above the circular muscular band of the os into the cervix of the uterus then it is that it gives rise to this fearful constitutional and nervous trouble and exhaustion, which is often supposed to be due to simple ulceration or some other morbid disease of the neck of this organ, not until within the last few years having been recognized by a very large number of our profession who have undertaken to treat these diseases. There are some lacerations which are external and very apparent; others may require our most thoughtful and rigid investigation, because the laceration, taking place internally, does not show upon the external parts. Many, I might say the large majority, of lacerations that I have seen have been what we may term internal lacerations. They may extend from the upper portion of the uterine neck down through nearly to the os, and are recognized by dilating the organ by the tupelo tent, or, as may be done oftentimes in very large uterine canals, with the dressing forceps, when we will see the fissure on one side extending down through the mucous membranes and extending for some distance into the interior of the uterus. This gives rise to very large and swollen lips and os, with a very great increase of bulk of the uterine neck, so that this portion of the lips and cervix uteri are often much larger than the body of the womb. These cases will go from one practitioner to another and be treated with slight apparent benefit to their irritable uterus and the leucorrhœal discharge which generally accompanies this extensive inflammation, but they soon relapse to be as bad as before, and seek some other practitioner who will relieve them. When such cases come to me I usually dilate and examine them thoroughly, and after I am convinced that there is an internal lac-

eration I apply strong nitric acid or the acid nitrate of mercury, or the actual cautery in some cases (and of late I think much of the galvano-cautery), and it is surprising how soon the patients regain their health, and the enlargement of the lips and the whole organ returns to its normal condition. Many of these cases that I have treated have given me no little reputation in the curing of patients who had sometimes been attended by some of our best authors and practitioners in New York and other cities. Some of these cases are supposed to have been subinvolutions, when in reality they are fissures of the mucous membranes, caused by the birth of a child at full term, or, more likely, a miscarriage at three or four months.

Out of a record of eighty-three operations on lacerated cervixes by denuding the parts and using sutures I have in some ten failed, they requiring a renewal of the operation. Three of these cases I re-operated on with success. The others disappeared, so that I know not what became of them. I have seen 250 lacerations that did not extend above the crown, and required no operative interference. I have seen over 450 cases of internal laceration, and of over 100 that I have now operated on seventy were on the right side and thirty on the left, and uniting, that is, double lacerations.

Many of these superficial lacerations may be benefited by the application of the actual cautery and packing the parts around with carbolized or iodized cotton. I have seen very good results in quite a large number of such cases.

TUMOR OF CEREBELLUM.

BY WILLIAM WATKINS SEYMOUR, M. D., TROY, N. Y.

I WAS consulted in my office July 10, 1882, by the patient, a boy sixteen years of age, accompanied by his father, regarding intense paroxysmal headaches, which were sometimes followed by pain for some hours. The patient's health was declared to have been excellent up to three months before I saw him, at which time the headaches began. And since he has been constantly dizzy, and has staggered. The pain began suddenly, generally about one o'clock every other night, was located in the left parietal region, and was so severe that at times the patient aroused the neighbors by his screams. Vomiting always accompanied the paroxysms of pain. There was an indefinable history of three epileptiform attacks. Judging from the vomiting and tendency to fall to the left that the headaches depended upon serious cerebral disease, I made use of the ophthalmoscope and found marked optic neuritis of both eyes. Vision, however, was $\frac{1}{8}$ in each eye, and both field and color perception normal. The tuning fork to forehead and teeth showed absolute deafness of left ear. There was no paralysis of ocular muscles, and light and accommodation pupillary reflexes were normal. Knee reflex normal. Sensation unimpaired. Heart and lungs sound. Patient could stand with eyes shut, and showed no loss of coördinating power in walking. Facial expression one of hebetude, and responses to questions slow. No history of syphilis, no evidence of tuberculosis. I informed the father that in my opinion his son had a tumor growing in the cerebellum, and I saw no hope for his recovery. The growth I inferred to be a glioma be-

cause of the absence of evidences of syphilis, tuberculosis, or heart disease leading to embolus or abscess. Large doses of quinine and of iodide of potash combined with bichloride of mercury were of no service. On August 8th I saw the patient at home, he having taken to his bed two days before. The paroxysms were much more severe, and at times there was retraction of head and neck; patient felt weaker, and was dizzy as soon as he sat up; there was a tendency to facial paralysis of right side, the mouth and tongue being drawn to left; this lasted only twenty-four hours. The right arm and leg appeared weaker than the left, the grip markedly so. No disturbance of sensation. Temperature normal. Mercurial inunction and anodynes for pain ordered. Dr. Winship, of Eagle Mills, who has had an unusually large experience with epidemic cerebro-spinal meningitis, saw him a couple of days later with me, and we were agreed that the trouble was in all probability a new growth. August 19th I was discharged for a physician who regarded the case as meningitis. Patient continued to fail. Hemiplegia of right side set in, then general paralysis of all extremities, and the patient could not open his jaws. During which time I was informed by the father the diagnosis was changed from meningitis to abscess, and finally it was thought possible there *might* be a new growth. On January 23, 1883, the patient died, and I being out of town, my father, Dr. William P. Seymour, and Dr. Henry Hun, of Albany, attended as my representatives the autopsy the following day. No evidence of meningitis was found. The lateral ventricles were greatly distended. The following is from a note to me from Dr. Hun: "Projecting from the cerebellum into the fourth ventricle, and very nearly occluding the latter, was a gray, transparent gelatinous mass. This mass occupied the central portion of the right lobe of the cerebellum, and almost the entire mass of the central body of the cerebellum, the left lobe being apparently not involved. Externally the cerebellum appeared normal, but the right lobe was a mere shell inclosing a soft, jelly-like mass. The medulla oblongata was apparently normal. Pons varolii showed on section an area of dark-gray degeneration occupying the position of the right processus cerebelli ad testes." Microscopical examination by Dr. Hun showed the growth to be myxo-glioma.

CASE OF LABOR. PYÆMIA. RECOVERY.

BY DAVID DANA SPEAR, M. D., FREEPORT, ME.

ON the 10th of December last I was summoned to attend a case of labor which was the beginning of a case of much interest as well as personal anxiety, and one which may not be uninteresting to the profession. I had, fifteen months previously, attended the same patient in her first confinement, at which time there was no abnormal condition with mother or child, and everything connected with the case was most satisfactory. In her second confinement, the one of interest, on making my first digital examination the os was found but little dilated, firm and hard to the touch, and I was told a large quantity of water had escaped some hours previous, so I had in store the attention upon a "dry labor," but the head was in the first position. On the anterior part of the os tinea, pendent

and movable, was a small, smooth tumor, about an acorn's size, which between the interval of the first and second examination had disappeared, having probably ruptured during a strong pain immediately after the examination. The labor lasted some ten hours, but terminated without further accident, and without interference, and had it not been for the sequel which followed would have been remembered only as tedious. On making my complementary visit fifteen hours later the patient was in good condition, with pulse at 80, temperature 98° F., and respirations 14.

Five days later the patient had a severe chill, soon followed by rapid pulse (120) and high temperature (105° F.), with rapid respiration (30), marked dullness under right scapula. Three days later rusty sputa and all the phenomena of a frank pneumonia, which ran a regular course with favorable symptoms to the seventh day, during which the lacteal secretion had ceased, but the lochial, however, had its regular course.

Twelve days after the labor, and seven after the initial chill, pain was complained of in the left arm, which became much swollen and tender to the touch throughout its entire extent. No one place was more painful than another. Temperature 106° F.; pulse 136; chills. Ten days later the pain became most severe about the elbow-joint, at which point I found fluctuation, and with the aspirator took sixteen fluid ounces of greenish pus. The condition of my patient at once became improved, temperature, pulse, and respiration becoming nearly normal. The appetite, which before had been nothing, was now good, and I pleased myself with the vain hope that the darkness had passed, and the day of complete recovery was at hand. Idle expectation, for some ten days later there was another chill, and a rapid rise of temperature and pulse, associated with severe pain in the right leg, the warning note of more trouble. The pain, swelling, and chills were troublesome symptoms. A tape around the thigh indicated twenty-nine inches. At this time, assisted by Dr. James M. Bates, a skillful surgeon, I drew off ninety-six ounces of pus. Two days later eighty ounces more, and within the next four weeks following, at different times, I drew with the aspirator the total amount of ten quarts of pus, when at last I enlarged the opening and put in a drainage tube.

Recovery has been complete. The treatment consisted of brandy, opiates, quinine, and Frye's emulsion, the last of which was taken for a long time.

To me the peculiar interest of the case is its rarity, and the recovery from a condition of pyæmia, which according to most writers, is equally rare.

To the full appreciation of the case I ought to state that the age of the patient was about twenty-three years, that she had, prior to this sickness, always enjoyed almost perfect health, and her history developed no hereditary taints or acquired malady.

— A writer in a contemporary on the hygiene of the rectum, deprecating too great haste in the unloading of that viscus as conducive to constipation, urges "humanitarians to insist that at least one third as much time be given to unloading the alimentary canal that they take in filling the same."

— Dr. Squibb remarks in the *Ephemeris* that the term "chemically pure" (C. P.) has lost all significance as commonly applied to drugs.

Reports of Societies.

PROCEEDINGS OF THE SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

MARCH 7, 1883. DR. R. M. HODGES presiding.
DR. A. POST read a paper entitled

CONGENITAL DISLOCATION OF THE HIP,¹

and exhibited two patients illustrating the condition.

In the discussion which followed DR. E. H. BRADFORD said that in almost all the cases which had come under his observation, a mistake in diagnosis had been frequently made. He had seen five cases of single congenital dislocation of the hip: one boy, three girls, and one baby whose sex he could not recall. The diagnosis is especially difficult in babies; if the child is frightened it is not easy to decide as to the presence of rigidity in fat infants, or to get Nélaton's line accurately. The previous history, if carefully considered, will establish a diagnosis.

In regard to the theory of its origin, Dr. Bradford added to those mentioned by Dr. Post that of Réclus, who suggests that it may sometimes be due to a form of temporary infantile paralysis, affecting only the muscles about the hip, coming on at some period between birth and walking, and giving rise to a dislocation.

DR. E. J. CUTTER asked the reader the explanation of the foot being everted in these cases, while in ordinary dislocation upon the dorsum it was inverted.

DR. POST explained that the absorption of the head changed entirely the conditions from those of a recent dislocation.

DR. D. W. CHEEVER asked if anything was known as to the condition of the socket in these cases.

DR. POST replied that the few recorded autopsies would seem to show that the socket was gradually filled up and obliterated, and instanced one case where there were three imperfect sockets, one having been gradually formed after another as the head of the femur changed its position.

DR. CHEEVER said that he should suppose the success of treatment would depend on the presence of the original socket, to which the head of the bone might be returned. Remembering that the socket in its prenatal condition is imperfectly developed, is there any proof that nature goes on to build up a perfect socket in these cases?

DR. POST could not answer positively, but was under the impression that one case had been recorded where at some years of age there had been found at the autopsy a perfect acetabulum.

DR. CHEEVER asked how long before the head of the femur was absorbed.

DR. POST replied that it must be longer than ten or twelve years. Cases had been reported where patients of this age had been very much benefited by treatment, reduction having been accomplished and maintained. In the case of the oldest girl shown, where the head of the femur could apparently be felt, he thought good could be accomplished by treatment, that is, reduction, and retaining the joint *in situ* by some form of retentive apparatus for a long period.

DR. CHEEVER asked if there was any record of im-

¹ See page 193 of this number of the JOURNAL.

provement having been gained by treatment in double congenital dislocation.

DR. POST said such cases were reported by various French authors.

DR. N. GREEN spoke of a case of double congenital dislocation of the hip which had recently come under his notice. The walk was very peculiar, but the person, now a young lady, had always been capable of considerable physical exercise, walking, running, and even as a child climbing trees.

DR. R. M. HODGES did not think in the cases exhibited or referred to there was sufficient evidence to show that at any time, even at birth, the head of the femur was perfect, and suggested that they might be considered congenital malformations rather than dislocations. This would account for the lack of the usual signs of dislocation, and the frequent failure to recognize what it appears is not a rare form of deformity. If at any time a perfect head of the femur had existed the symptom of dislocation must have been present. Their absence would seem to indicate that this part of the femur had never been fully developed.

CONTRACTION OF THE KNEE-JOINT TREATED BY SPLINTS.

DR. H. L. BURRELL and DR. F. S. WATSON showed patients who had been treated by them for contraction of the knee-joint by different splints.

DR. A. T. CABOT showed a patient treated for the same condition by the *brisement forcé* method, the leg being incased in plaster of Paris. Their remarks, as well as those of Dr. E. H. Bradford on the same subject, follow:—

DR. BURRELL. This apparatus is one intended to straighten false ankyloses of the knee-joint. In the flexion resulting from chronic disease of the knee-joint there is a dislocation backward of the head of the tibia on the condyles of the femur and an eversion of the foot; this, of course, occurs in all degrees, from the slightest subluxation to where the head of the tibia may rest practically in the popliteal space.

To reduce this deformity two forces should be applied: one of which shall steady the condyles of the femur, while the other pushes forward to its proper plane the head of the tibia. These two forces alone, however, would cause the head of the tibia resting in one plane to impinge against the condyles of the femur which rest in another; therefore, extension to the leg and counter-extension to the thigh are necessary that the head of the tibia may glide forward over the condyles of the femur. As the deformity diminishes the eversion of the foot will correct itself.

To meet these indications an apparatus is constructed of two iron wires, one of which, extending in the line of the femur from the perineum on the inside of the thigh, is united posteriorly by a light steel band to the other, which occupies a corresponding position on the outside of the thigh. These wires extend three inches beyond the foot, then turn at a right angle downward to give a point for application of extension. These wires may be bent at the knee-joint in the severer forms of flexion.

The wires should be united over the surface of the patella and on the anterior surface of the thigh by two strong leather flaps which lace up in front. Care should be taken that the surface of the thigh be well padded, especially just above the patella; this gives the steady force to the femur.

The force forward to the tibia is gained by a plaster-of-Paris shell, which extends posteriorly from the head of the tibia half way down the leg, and half encompasses it; into its upper and lower portions should be incorporated pieces of webbing which are to be attached to buckles on the anterior wires.

The extension is obtained by strips of adhesive plaster on the leg attached to sliding buckles on the right angle turn of the wires; the counter-extension by strips extending up the thigh and attached to buckles on the posterior steel band.

This girl, a patient of Dr. E. H. Bradford's, is nine years old, and has had disease of the knee-joint for three years. She entered the Home of the Good Samaritan with her leg flexed at an angle of 110°; the patella was firmly adherent to the surface of the condyles, and the cicatrix of an old sinus existed just outside the patella; forced flexion produced but slight movement in the joint.

A splint similar to the one described was applied after patient had been in bed six weeks. The deformity was corrected in three weeks from the application of the splint. The leg and thigh were then encased in plaster of Paris, and the child went home on crutches with a high shoe on the sound leg to relieve the lame leg of all chances of pressure.

For this apparatus it is claimed that it is easily constructed and inexpensive, and that it correctly applies the forces necessary to reduce contractions of the knee-joint.

DR. F. S. WATSON. Most authorities agree that contractions of the knee-joint originate in most instances in disease within or about the joint. The class of deformities referred to are represented by more or less flexion of the leg upon the thigh, accompanied in the majority of cases by a backward dislocation of the tibia upon the femur. The two chief factors for the production of this position are:—

(1.) That flexion is the position giving the greatest capacity to the joint, and securing the least inter-articular pressure, and hence the least pain.

(2.) That the flexor group of muscles is credited with a greater strength than the extensors, and in overcoming their action flex the leg on the thigh.

Maintenance in this position finally occurs, first, by the continued contraction of the flexors; second, by the growth of more or less firm fibrous bands within or around the joint or of bony union (false and true ankylosis). Flexion is an early feature in the deformity; dislocation of the tibia and the ankylosis come on more gradually. The result is an inability, total or partial, to use the limb, and destruction of the joint's function. Hence these cases have a strong claim upon the surgeon's attention. Two methods have been for many years employed in the treatment of these cases:—

First, the sudden restoration of the limb to its normal position, by rupture of the adhesions, preceded or not by tenotomy. The method which experience and intelligence have selected as best to accomplish this is that by sudden flexion followed by extension. A large experience of this operation has shown it to be free from danger ordinarily, and it has justly been a favorite practice.

The second method may be employed when for any reason it is desirable to avoid an operation, and is that by gradual mechanical correction.

The indications for the application of mechanical

force are as follows: To reduce the backward dislocation of the head of the tibia and draw out the flexor muscles to their original length: and as an assistance to this manœuvre to pull apart the articulating surfaces of the joint. The former is accomplished by pressure properly applied against the back of the head of the tibia, acting forwards. The latter by extension on the lower leg in the line of deformity, which will always be a changing line as the leg straightens. The third indication is to fix the femur in such a way that these manœuvres can be executed upon it as a fixed body by the tibia.

These principles have all been recognized and acted upon in various ways for many years, and many ingenious apparatuses have been devised to accomplish the result. Little's, Thomas's, and Schaffer's may be mentioned as meeting the indications satisfactorily. The means which accomplished the correction in this case is one way of doing it, and is in imitation of that employed by Dr. Burrell in a case the action of which I had the opportunity of seeing.

This treatment is not preceded by tenotomy. Of course success by this procedure is not contemplated in cases of bony ankylosis.

A. M. W., aged ten. Phthisical history on mother's side; child had whooping-cough at two years. When a year and a half old was struck on the right knee by a water pail. This was followed by an acute synovitis. Some pain and swelling were still present one year later, and the limb was flexed, but could touch the toe to the ground and use the leg to walk on. For two years she continued to walk without the aid of a crutch, since which time flexion has gradually increased, until the present condition was present. Deformity has existed there for seven and a half years, and the patient has been unable to walk without crutches for four years.

Condition on Entrance. General condition good. Right knee larger over the condyle by half an inch than the left—eleven and a half inches, eleven inches. Muscles of the thigh and leg somewhat but not markedly atrophied. Patella lies over the external condyle, and is immovable. Leg can be flexed slightly; farther extension is quite impossible, the leg being held rigidly. There is no sense of grating or unevenness within the joint when the leg is moved. No points of tenderness. There is a backward dislocation of the tibia not very marked.

January 1st. Splint applied.

February 3d. Leg straight; splint removed, and leg put up in plaster.

During the treatment there was some redness about the joint and considerable pain for a time.

Dr. A. T. CABOT showed a girl six and a half years of age whose knee he had recently straightened. The disease which caused the contraction began three years ago. In August, 1882, she entered the Massachusetts General Hospital with the knee strongly flexed and free from pain. It was straightened by gradual extension, and she was discharged September 23d with the leg in good position.

January 22, 1883, she reentered the hospital with the knee strongly flexed and immovable by any moderate amount of force. The patella was fixed.

February 9th. The child was etherized, and with a considerable exercise of force the leg was partially straightened and put on a ham splint. By the advice of Dr. Hodges, the complete straightening was left for

a subsequent operation. The patella could not be loosened from its adhesions.

February 20th. The child was again etherized, and the knee yielded easily, coming into good position. A plaster bandage was at once applied, and the leg was fixed in about the position it would assume on a slightly curved ham splint. The child suffered no pain after the operation, and was running about the ward on the second day.

Dr. Cabot called attention to the value of this operation in cases where, owing to tuberculous tendencies, it is unwise to confine the patient long in bed.

In addition to the cases reported by Drs. Burrell and Watson, Dr. BRADFORD reported the following case:

W., girl, nine years old, with chronic disease of the knee-joint of four years' standing, without suppuration, with some enlargement of the femur, and a puffy condition of the soft tissues of the joint. The patient had had attacks of pain which had rendered the limb useless for months, but had recovered so as to be able to walk on the limb with only occasional and temporary pain. The limb was badly contracted at the knee, so that the leg formed nearly a right angle with the thigh. There was no ankylosis, there being slight movement at the joint. The patient's surroundings and family history were good.

Various attempts were made to correct the deformity, but without success. In November the appliance described by Dr. Burrell was employed, and by the last of January the limb was practically straight. At this time if the patient sat upon the floor with the leg kept as straight as possible, but without pressure upon the knee to hold it down, the space between the floor and the popliteal space was one and a half inches.

A fixed appliance was then put on. The case differs from those just mentioned in that the patient was allowed to go about during the treatment, and was not kept in bed a single day; the child used crutches, and the foot on the well side was raised so that the affected limb should swing free of the floor. The complete correction was delayed by the fact that the parents were inclined to loosen the straps at night whenever the pressure appeared to be at all annoying to the child. No opiates were required, but for the first two weeks the child seemed to be troubled by the constant pressure.

But little gain in the correction of the deformity could be noticed until the third week of treatment.

Dr. Bradford thought that the appliance devised by Dr. Burrell had certain manifest merits; it is light, cheap, easily attended to, and easily made. It is not so clumsy as that used by Little, and without being less efficient allows the patient greater freedom. It is much less complicated than the splint recommended by Dr. Schaffer. The pressure backward and forward necessary to correct the deformity can be more easily regulated in Dr. Burrell's splint than in the simple apparatus used by Thomas, of Liverpool.

This latter appliance, though rather clumsy, is of help in the correction of this distortion, as Dr. Bradford had had an opportunity to see in two cases; one, a girl of twelve years with a contraction of the knee of two years' duration; the second, a girl of ten. In this latter case the limb recontracted in about two years, owing to a subsequent injury and neglect of the splint in after treatment.

It is manifest that mechanical treatment is not feasible in all cases of this sort. It demands for success a

certain amount of attention on the part of a nurse and a certain amount of time. If these cannot be obtained forcible measures are to be preferred.

Dr. Bradford reported seven cases of forcible straightening for right-angled deformity of the knee-joint following chronic disease of the knee. Tenotomy was done in all of these, and the limb was fixed immediately after the operation. The patients ranged in age from twenty-four to two years, and the affection was in various stages of development, from that of a subacute inflammation of a few weeks' duration to that with firm fibrous ankylosis which had lasted for years. In the child of two, an open sinus was present. In a boy of fourteen, separation of the epiphysis at the lower end of the femur occurred during the straightening; union took place, however, readily, and a useful limb resulted.

The practice in these cases differed somewhat from that recommended by many authorities: (1) in fixing the limb in the straightest possible position immediately after tenotomy, instead of waiting a few days for the wound by the tenotome to heal; (2) in securing the limb in a fixed dressing immediately after the straightening.

It is a well-established fact that the main check in the attempt to straighten a well-marked contracted knee is not the muscular contraction but the deep fascia and posterior capsule.¹ Under an anæsthetic a limb can be forcibly held much straighter than is possible without anæsthesia, and it saves the patient time and annoyance if what is gained in this way be kept. This can be done without discomfort to the patient by fixing by means of plaster-of-Paris bandages, provided they are applied so as to exert an equal pressure over the whole limb, and provided the limb is well held while the plaster splint is applied and until it is hard. Of the seven cases mentioned a plaster bandage was used as an after-dressing in all except that of the patient twenty-four years old, where a ham splint was used; this was loosened, however, on account of the pain occasioned and the result was not as good as in the other cases, where a plaster bandage was applied, which seemed to occasion much less pain as well as to give better fixation.

A general discussion followed on the merits of the different materials for a stiff bandage.

Recent Literature.

Second Annual Report of the State Board of Health of New York. Albany. 1882. 726 pages.

First Annual Report of the State Board of Health of New Hampshire. Concord. 1882. 318 pages.

First Annual Report of the State Board of Health of Arkansas. Little Rock. 1883. 181 pages.

Our neighboring States of New York and New Hampshire, together with the State of Arkansas, having wheeled into the line of States which have established boards of health, the latter being the twenty-eighth and last of the list, have issued their Annual Reports.

The New York Board is composed of nine members, three of whom are appointed by the Governor, with the advice and consent of the Senate, and are entitled Commissioners of Health, three are appointed by the

Governor alone, and are selected from the Commissioners of Health of Cities, and three are *ex officio* (the Attorney-General, the Superintendent of State Survey, and the Health Officer of the city of New York).

The act establishing the Board has in general the provisions of the Massachusetts act of 1869, with certain exceptions.

Section 8 provides that the Governor may require the Board to examine and report upon nuisances affecting the security of life and health. It also provides that the Governor may order the abatement of such nuisances, fixes the penalty of neglect to comply, and also makes provision for the execution of the order.

The first fifty pages of the report contain a summary of the work of the Board, followed by an abstract of its transactions, a report of its finances, and of the Committee on the Registration of Vital Statistics. The work of registration in New York is hardly begun. Previous to the appointment of the State Board of Health there was no system of registration of vital statistics except in six cities.

Investigations of prevalent diseases, notably of small-pox, diphtheria, and typhoid fever, in special localities follow, and also several papers relating to the prevalence and the control of contagious diseases, which were issued as circulars for public distribution.

The report of the Standing Committee on Public Institutions is devoted entirely to the sanitary condition of the school-houses of the State, and of the million or more of their occupants. For this purpose the Board have availed themselves of the valuable assistance of Dr. D. F. Lincoln, who devoted his time and attention for several weeks to the school-buildings in ten counties and eight cities. The subjects of investigation have been (1) heating and ventilation; (2) lighting; (3) size of rooms; (4) desks and seats; (5) drainage, sewerage, and plumbing; (6) state of repair and safety; (7) wardrobes, water supply, and personal cleanliness; (8) school hours; (9) vaccination and prevention of contagious diseases; (10) criticism of plans of school-houses, etc.

A brief synopsis of replies to inquiries is given. Dr. Lincoln's report on School Hygiene deals mainly with the subjects of ventilation and of lighting, and is amply illustrated with diagrams of school rooms, showing faulty and model systems of ventilation and lighting.

Dr. Agnew contributes a paper on an Epidemic of Contagious Ophthalmia in a State Institution, in which the disease was believed to have been due to imperfect quarantine, bad lavatories, overcrowding, bad food, and bad drainage.

The importance of thorough quarantine to the people of New York, and through them to the rest of the United States, cannot be overestimated when it is borne in mind that a half million people arrived at the port of New York in 1881, and a greater number in 1882, to be distributed throughout the Republic.

This portion of the report comprises a brief historical summary of the subject of quarantine, accounts of special cases and regulations of the National Board as to contagious diseases. Of the two principal diseases subject to quarantine laws, yellow fever and small-pox, the latter with its kindred subject, vaccination, claims the chief share of attention. The opponents of vaccination will find little consolation in the following statement: "It has been estimated that not one case in 100,000 vaccinations (of immigrants) with bovine virus has been attended with unpleasant results. The

¹ Swain, Knee-Joint, page 55, for a pathological proof of this fact.

records of the Vaccine Department of the New York City Board of Health show that in seven years previous to January 1, 1882, 101,420 primary vaccinations and 343,708 revaccinations were made without results prejudicial to health which were justly chargeable to vaccine influence.

The report of the Committee on Drainage, Sewerage, and Topography contains the results of their investigation in certain localities, and recommends the following subjects for future work:—

(1.) What is the best plan of a separate and most economical system of sewerage for villages and small cities, and by what methods shall the outflow of the storm-water and the soil drainage of such places be secured?

(2.) How shall the ground drainage of building sites be secured for separate dwellings and villages?

(3.) What provisions are to be required in a general drainage law?

(4.) What other preliminary work as to sanitary drainage should be done by the State, and what responsibility should be required of the State Board as to projects of general drainage?

The first of these topics is answered by the special report of Dr. Gardiner, the Superintendent of State Survey, who treats of the advantages of *dry removal* and of the pail system, of water carriage and of separate sewerage. The report of Mr. Latrobe to the city of Baltimore on the Memphis system is recommended in terms of unqualified praise.

That the Board stand committed to the separate system of sewerage is evident from the eighth clause of their resolutions, page 335:—

"The separate system of sewers with flushing tanks is hereby recommended for general use in the State."

The report of the Committee on Effluvia Nuisances deals chiefly with the condition of certain manufactories on Newtown Creek, a locality where the number and variety of stenches cannot be excelled in America. Upon this stream, a short distance only from the populous parts of New York City and Brooklyn, are located petroleum refineries, fat rendering works, superphosphate works, manure dumping grounds, tripe and gut works, varnish factories, gas works, *et id omne genus*. Generally the operations of those works appear to have been conducted in a slovenly and offensive manner. The worst nuisance with which the Board has had to deal is the "sludge acid," or the spent sulphuric acid used in the refining of petroleum, and loaded with all the disgusting sulphureted vapors, vast quantities of which are daily let loose into the tidal waters of New York and Brooklyn.

The thorough and well-nigh exhaustive researches of Dr. Ballard in England show that it is for the interest of the manufacturer to arrest the offensive exhalations from such works.

The final portion of the report includes the reports of the Sanitary Committee on the following subjects:—

(1.) The chemical examination of drinking waters.

(2.) Methods and apparatus for testing inflammable oils.

(3.) Report upon adulteration of food and drugs.

The report upon food and drug adulteration comprises the final two hundred pages of the report, and is a valuable contribution to the literature of that subject. The law of New York is similar to that of Massachusetts, the amount appropriated for its execution being much larger. The work of inspection and anal-

ysis is distributed among several analysts in different portions of the State.

The report is especially valuable for the full bibliographical lists which are appended.

The First Annual Report of the New Hampshire Board contains articles upon the following subjects:—

(1.) The Secretary's report, dealing chiefly with the subject of small-pox in New Hampshire in 1881-82, and the pollution of the Ammonoosuc River.

(2.) Vaccination, being a reprint of Dr. Lindsley's excellent article published in the Fourth Annual Report of the Connecticut Board.

(3.) Ventilation, by Dr. G. P. Conn. A practical statement of this important subject, and especially valuable as based upon the writer's own experience.

(4.) Suburban School-Houses, by W. R. Briggs, Esq., of Bridgeport, Conn.

(5.) Adulteration of Food, by Dr. E. J. Bartlett.

(6.) Water Contamination, by Dr. A. H. Crosby.

(7.) State Medicine in Germany, by Dr. C. H. Horsch.

(8.) Common Law relating to Nuisances. Citations.

(9.) Registration Report.

The First Annual Report of the Arkansas Board contains the Act establishing the State Board of Health, which is similar in its provisions to that of other States. Also the records of the transactions of the Board, with circulars relating to epidemic diseases, etc.

Laws regulating the Registration of Vital Statistics, which do not appear to have been generally complied with.

Reports or Addresses of the President of the Board upon various health topics.

Statistics and Reports as to Small-Pox, from which it appears that in Little Rock there were seventeen cases of small-pox in 1882, nearly all in public hotels. Two cases resulted from the breaking down of a vehicle in which the body of a small-pox patient was being conveyed to a cemetery. Of these seventeen cases thirteen had never been vaccinated, and nine of the thirteen were fatal.

Such statistics, though meagre, are valuable as confirming the accumulated evidence of the past century as to the efficacy of vaccination.

Our own excellent system of registration in Massachusetts might be still farther perfected by a law requiring every physician who is called to give a certificate of death in a case of small-pox to state whether the deceased had or had not been vaccinated. Such a bill was prepared during the session of the Legislature of 1883, but owing either to the neglect or opposition of an inefficient public health committee no action was taken upon it.

A brief report on an outbreak of choleric disease in a hotel in consequence of a neglect of sanitary precautions as to the proximity of the public well to the water-closet.

The publication in a State document of the sensational report of the American Public Health Association as to the prevalence and prevention of venereal diseases is a matter of doubtful propriety.

The remainder of the report is mainly statistical, and consists of meteorological and vital statistics of a few cities and large towns.

— *In vino veritas* is amended by the enterprising druggist into *in soda sanitas*.

Medical and Surgical Journal.

THURSDAY, AUGUST 30, 1883.

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COLLECTIVE INVESTIGATION.

WE took occasion when the subject was first under discussion to draw the attention of our readers to the plan for the collective investigation of disease of the British Medical Association. The object of the movement is the collection of the scattered observations of such members of the Association as feel inclined to join in the movement. The suggestion to combine the observations of many has attracted very wide attention, and propositions have been already made in other countries for similar investigations. The subject was brought before the American Medical Association at its last annual meeting by Dr. Billings, and was referred to a committee of which Dr. Davis, of Chicago, is the chairman, but so far as we know no definite action has yet been taken towards carrying the idea into active operation. The subject has been brought before the Berlin Medical Society, and committed to a committee which contains among others the well-known names of Professor Frerichs and Drs. Leyden, Fränzel, Ewald, Jastrowitz, Löwenstein, and Börner. The plan of the Collective Investigation Committee having the matter in charge for the British Medical Association has been to issue memoranda on several subjects for inquiry, and to issue with them cards of questions to be answered. Such memoranda have been issued on acute rheumatism, acute pneumonia, inherited and acquired syphilis, diphtheria, and the question of the contagiousness of phthisis, and the first report of the committee has been already issued, and lies before us. This report is in a measure preliminary, but it is evident that the method of studying the phenomena of disease proves attractive to a large body of the British profession. Rarely has so much time and effort been freely given as by the various members of the committees in the hope that the profession at large would appreciate and respond to their efforts. When we repeat the announcement of the committee that they have already in hand sufficient material to more than fill another such volume as the present, and the returns are rapidly accumulating day by day, it will be abundantly evident that their efforts meet the response desired.

The present volume is edited by Professor Humphrey and Dr. Mahomed, and contains the addresses of Sir William Gull and Sir James Paget, which were delivered as a means of encouraging the movement at its inception, and serve as an introduction to the present report. The greatest space is taken up

by a report on the contagiousness of phthisis, of which we speak more at length in another place, our object at present being simply to note the general progress of the movement. Preliminary reports on acute pneumonia, chorea, acute rheumatism, and diphtheria follow. The volume also contains reprints of the memoranda and questions issued on the other subjects. The report shows that the chief aim of the investigation so far is the collection of simple facts to which any physician of large practice may contribute, and it is made evident that the system is capable of producing results sufficient to justify the efforts that have been made.

"THRIFT, THRIFT, HORATIO."

A NEW departure in the medical business has been inaugurated in a town not many miles from this city by a young man who has issued his prospectus to the inhabitants, as follows:—

"A young physician, graduate of a regular medical college, having about three years' experience in hospital and private practice in the Ohio Valley, is desirous of locating in this section. Being obliged to earn a livelihood for himself and family, and at the same time knowing the slowness and difficulty of obtaining a practice in the ordinary way, offers [*sic*] to contract for your patronage at the following unprecedented terms:—

"Single persons five dollars per year.

"Entire families, three dollars per year for each member.

"Surgical operations and labor cases extra, at reduced rates, payable quarterly in advance.

"He also agrees to visit you at least once every week, unless called upon to treat you for some sickness requiring more frequent attendance. This will give you the advantage of medical advice in many cases about which persons do not ordinarily consult a physician. He will frequently, also, be enabled, by this arrangement, to ward off a serious attack of sickness by timely treatment.

"For further information apply to ———, M. D.

"Or leave your address and he will call."

Only one or two possible difficulties occurs to us in this arrangement. The contract price per quarter in advance for surgical and obstetric assistance is not specified. It can hardly be one price for all, because the elderly spinsters will never pay the full of this extra fee, half of which presumably goes for midwifery attendance. No, there must be a sliding scale, arranged according to the contractor's estimate of the number of surgical operations and deliveries that he will be called upon to perform for the individual in question during the quarter. And even then there may be trouble; for having paid for a confinement during the given quarter a matron may insist on delivery of the goods; or a man may decide to anticipate all the surgery he will need in a number of years during the quarter that he is "taking" of the practitioner. Furthermore, on the other hand, if the young physician is an enthusiast in his profession he may insist that his contract to do all manner of surgical operations for a man during a given period carries with it a right as well as an obligation, and may thereupon proceed to go through the catalogue of operative surgery, the patient *volens volens*.

With these trifling queries as to minor details we welcome the plan of the young man from Ohio as thoroughly original and comprehensive. It takes off fictitious and inflated values, and puts his services at

a fair compensation. If he will furnish his own medicines the public cannot afford to do without him. The stipend is by no means exorbitant. At the utmost it can never be more than a fraction over nine cents per visit, even to a "single person," and in case the patient should be taken sick, especially if he be a family man, it is liable to fall to a really very modest figure. Add to this the attraction of a weekly social call, and even to the single person, to whom this luxury comes highest, the inducement may be fairly considered "unprecedented."

A REPORT ON THE COMMUNICABILITY OF PHTHISIS.

IN the last issue of the JOURNAL an abstract was given of the laws which were passed in Naples toward the end of the last century at the instigation of its Sanitary Council to control the spread of phthisis by infection, and in another editorial article a brief account is given of the general methods and aims of the Committee on Collective Investigation appointed under the auspices of the British Medical Association at the instigation mainly of several earnest enthusiasts, among whom may be mentioned Professor Humphry, of Cambridge, and Drs. Mahomed and Ransome. Among the interesting and instructive papers contained in the Collective Investigation Record of July, 1883, the longest and most important is a Report on the Communicability of Phthisis, some of the details of which we take much pleasure in reproducing, especially in continuation of the subjects spoken of in our last number.

The sub-committee appointed to draw up this report consisted of Drs. Dyce Duckworth, Taylor, Tyson, Burney Yeo, and Mahomed as secretary. Last January they addressed the following questions to every member of the British Medical Association: (a.) Have you observed any case or cases in which pulmonary consumption appeared to be communicated from one person to another? Answer "yes" or "no." (b.) If more than one case observed, say how many. (c.) If any case or cases have been observed give any brief particulars you may think worthy of record, noting the following points: (1) the date of the observation; (2) the relationship, if any, between the individuals concerned; (3) the presence of family predisposition to the disease. It should be particularly noted whether the disease had occurred in the parents, grandparents, and other relatives, or only in the brothers or sisters of the person to whom the disease was communicated.

Simultaneously an article was inserted in the Association's *Journal* setting forth the scope and object of the investigation with a brief account of the history of the inquiry by previous investigators. The committee deemed it advisable that their first effort should be a very simple one, that the initiatory questions should admit of immediate and ready answers, and that it should be left to the observers to answer them in their own fashion, and it could then be easily seen, they thought,

whether the subject was one which might be pursued further and in a more systematic manner with advantage. In this address the word "contagiousness" is made synonymous with "communicability," and the question becomes, Is phthisis communicable under *any* conditions, and if so, under what? The address further gave a brief synopsis of the inquiries of previous investigators, among our own countrymen mention being made of Drs. Bowditch, Da Costa, Solis-Cohen, Stillé as in favor of contagion being a cause, and Dr. Rush as denying it. The figures of Dr. Holden, of New Jersey, are not mentioned.

The committee received 1078 returns to their circular. Of these returns 673 were simply negative, showing that no case had been observed by the member making the return, but expressing no opinion. Such returns were set aside, as admitting of no further analysis. The remaining answers, containing observations of some kind, were classified as follows:—

Class 1. Affirmative observers	261
Class 2. Doubtful observers	39
Class 3. Negative observers	105

The returns in Class 1, containing the affirmative observations, were subdivided into groups, according to the nature of the relationship between the victims. Thus 158 of the affirmative returns refer *exclusively* to cases observed between husband and wife, and communication between husband and wife is mentioned in 34 of the remaining returns. In 119 of these cases it is stated that the disease was transmitted from husband to wife, and in 69 from wife to husband; and it is distinctly stated in 130 of these cases that there existed no family predisposition to phthisis in the partner to whom it was supposed to be conveyed. The ratio corresponds in a general way with that resulting from previous inquiries.

In a relatively great number of the cases of communication a very rapid course of the disease was noted.

The returns are published in full or abstract as an appendix to the committee's report, and comments are made in the text on quite a number, for which, as well as for a further analysis of the returns, our readers would do well to consult the original report when possible.

One fact, the committee think, these returns — in common with former ones — seem to establish beyond any question, and that is, that if phthisis is a communicable disease it is only so under circumstances and conditions of extremely close personal intimacy, such as persons sharing the same bed or the same room, or shut up together in numbers in close, ill-ventilated apartments. And in conclusion of their report a hope is expressed that their returns will be of considerable value in addition in leading to more open-mindedness in the discussion of disputed questions of experience and observation.

It seems perfectly clear, from a consideration of the evidence here collected, the committee thinks, that many observers of undoubted capacity and trustworthiness have observed cases which it has never fallen to the lot of many others to encounter.

It is, perhaps, equally certain that many observers

of equal ability and carefulness have been led to draw different inferences from the observation of the same facts, and these differences of opinion may probably in many instances be traced to the existence in their minds of pre-accepted pathological doctrines.

Nothing could show more conclusively the value of *collective* investigation as opposed to *individual* impressions.

MEDICAL NOTES.

— We have often mentioned the Sea-Shore Home at Winthrop, which receives, and cares for, each summer a certain number of children afflicted with the summer digestive diseases, as a most interesting and praiseworthy charity. We believe it to be an important element in diminishing the death-rate of children in Boston during the summer months. It is dependent for existence on annual contributions, and its claims upon the charitable are annually set forth in its reports and the daily press. We are glad to see that it has been the recipient of a benefit in the shape of a grand concert and ball at Nantasket. The home is capable of using judiciously a much larger sum than it has ever had at its disposal.

— A correspondent of the *British Medical Journal* writes thus of the antagonism of strychnia and prussic acid: Some years since it became necessary to destroy an old dog. A large dose of strychnine was administered in bread, but the poison did not act very rapidly, and, as the animal's struggles and pains were distressing to watch, some hydrocyanic acid was poured in his mouth to complete the poisoning and hasten the end. To our surprise, the animal at once improved, and eventually recovered. I had forgotten this until the other day, when one of our cats was found dead in the garden, and the other dying, with all the symptoms of strychnine-poisoning, namely, constant tetanic spasms, and dilatation of the pupils, and insensibility to light. The cat was held firmly, and three or four drops of hydrocyanic acid dropped carefully on the tongue. An improvement was shortly visible; the pupils of the eyes became normal, the convulsions became less and less severe, and in a few hours the cat was all right again. I would add that the cat was nursing a kitten, which apparently suffered no inconvenience from the poison.

— The latest contribution to the sea-sickness discussion is the remark of Henry Ward Beecher, who, in referring to his trip to Europe, says he agrees with Dr. Thomson, who said, when he came on deck, that the ocean looked like one vast dose of ipecac.

— A Western contemporary recently spoke somewhat despairingly of the sanitary situation in the city which it represents, believing that the possibility of epidemic visitation during the coming season, and the lack of either municipal or State Board of Health, justified a protest. But it hastened to add: "However, we much prefer no board at all to one composed of saloon-keepers and members of the criminal classes. We want men of education and more than ordinary intelligence to compose this most important of all

municipal boards. Let the bummer element be represented elsewhere." But before this lament was published, almost before it was written, the city fathers proceeded to erect a bulwark against the cholera, in the shape of a board, constituted, our contemporary remarks, as follows:—

"Its members consist of five saloon-keepers and one poor, blear-eyed quack doctor, who advertises to cure the opium-habit and restore lost virginity, and wears a chronic blush on his nasal organ. Just why so much medicated wisdom was injected into that board is beyond our ken. "Our boy says it's all right; the cholera is coming and that will make business good for the doctors. The five saloon-keepers can outvote the other fellow every time, while they will have the advantage of his advice and operative skill in case their virtue is assailed."

— The JOURNAL is in receipt of a communication which describes a patient as having received a wound in the *lumber* region. As the individual in question is a resident of Maine we are in some doubt as to how to interpret the statement.

— Professor Neumann, of Vienna, has recently inoculated several monkeys with the secretion from indurated chancres, and has also inserted portions of chancres beneath the skin of these animals. The results in all cases have been negative; neither local nor constitutional symptoms were produced. Inoculations with syphilitic products were also made upon two horses, a pig, and a martin, all of which were unsuccessful. These results of Neumann are in contradiction to the researches of Klebs and Martineau, who in the past year or two announced that they had succeeded in communicating, by inoculation, syphilis to monkeys. — *Wiener Med. Wochenschrift*, Nos. 8 and 9, 1883.

— A rowing man who wished to exchange his adipose tissue for muscle, says an irreverent English paper, went to a well-known physician up river for advice. "Do you eat butter and fat?" asked the leech. "Yes," said the client. "Well, you must knock off that," returned the doctor. "Do you drink beer and spirits?" continued he. "Yes." "Then you must knock off that." "Do you smoke?" inquired the medical man, feeling for his stethoscope. "Yes," said the oarsman. "Then you must knock off that." "What is your fee?" inquired the athlete. "Two guineas," murmured the medical man with a faint smile of expectation. "Well, you must knock off that," said the candidate for Henley honors, as he seized his hat and made way for the next patient.

— A child, in St. Paul, Minn., nine years old, that had been in poor health for some time, was put under the care of a female practitioner in St. Paul who styles herself a "magnetic healer." At that time the child had been seized with pains in the back and the limbs, which the "healer" diagnosticated as "sciatic rheumatism." Soon after this the child was found to have fever, and a rash made its appearance — "an eruption of the blood," said the "healer," caused by the "strong medicine" employed before the patient had come under her care. She gave an encouraging

prognosis, and persevered with her treatment. Before long the family and the neighbors bethought themselves of small-pox, and asked the "healer" if it might not be that disease that the child was suffering from. On being asked this question the woman professed to consult the spirit of a doctor who, she said, had been dead several hundred years. The spirit having assured her emphatically that her patient's sickness was not small-pox, she informed the family to that effect, and repeated her cheerful prognosis. Nevertheless the child grew worse steadily, the family became dissatisfied, and when at last a nineteenth century physician was consulted the disease was found to be confluent small-pox. All this happened in a large boarding-house, in which ten persons contracted the disease, three of whom died.

Correspondence.

MEDICAL SUFFERERS BY THE FIRE AT VINEYARD HAVEN.

MR. EDITOR, — Let me beg you to put an appeal into the Boston Medical and Surgical Journal, asking the profession to aid *such members of the Massachusetts Medical Society* as have been sufferers by the recent fire in Vineyard Haven. I know personally that one member of the Society who has been a hard worker both in medicine and in the collateral sciences has lost his office, his library, and his whole stock of drugs, the last alone being of the value of five hundred dollars.

Please let subscriptions be sent to the JOURNAL. Were I to be in town I would take charge personally, and save you the trouble.

Cordially yours, E. WIGGLESWORTH.

The editor of the JOURNAL will most gladly receive any contributions for so worthy an object, and sincerely hopes Dr. Wigglesworth's appeal will meet with a liberal response.

RHEUMATISM IN THE HORSE. TREATMENT BY SALICYLATE OF SODA.

MESSESS EDITORS, — A few weeks since my horse returned to the stable after his day's work apparently in perfect condition. On the following morning he was found to be quite lame, and seemed to be suffering very much. The left hind fetlock joint was swollen, hot, and tender on pressure, the inflammation also affecting the tissues over the pastern bones down to the hoof. Movement was evidently quite painful, the animal bearing but little weight on the foot involved. The swelling, heat, and lameness increased, extending half way up to the hock. As he stood in the stall the foot was set forward most of the time, so as to diminish as far as possible the tension over the pastern bones; flexure at this part, when the limb was raised, seeming to cause no special discomfort. As the inflammation progressed the horse stood a good deal of the time with the heel raised, so that the front edge of the hoof only touched the floor, and at times was clear of it, his whole weight resting on three legs. There was entire loss of appetite.

The routine stable treatment in such cases was employed for four days (such as hot fomentations at first, followed by cold-water bandages) without relief, the

case in fact growing worse all the time. As the symptoms looked more like those of acute rheumatism than anything else I determined to try salicylic treatment. Taking the weight of the animal as a rough guide for the dose I decided to give him six times as much as a minimum dose for a man, and accordingly administered a drachm every two hours, beginning with two drachms. The most marked improvement appeared during the first twenty-four hours, at the end of which he had taken an ounce of the remedy. The heat, swelling, and pain were obviously less, and he stood with his heel down, although favoring the limb occasionally by advancing it a little before the other. The treatment was repeated, and a second ounce of the salicylate given in the course of the next twenty-four hours, with continued rapid improvement. At this time he stood in the stall with his hind feet side by side, bearing equally upon them, and when led out showed very little limp. I did not think it necessary to go on with the remedy, as all the symptoms steadily improved, his appetite rapidly gaining, so that in a day or two he bore considerable walking exercise outside of the stable, with scarcely a trace of lameness to be detected. Some swelling remained, however, for some time after, but the horse was in full use again within ten days of the commencement of the salicylate treatment, apparently as well as ever.

I am not informed whether salicylate of soda is ever given by veterinary surgeons in such cases, but the effect following its use in this case was quite as striking as when it is employed in human rheumatism. It was administered without difficulty by means of a spoon. On another similar occasion I should give it earlier and in a larger dose. There was none of the sweating which generally follows the use of the drug in the human subject.

S. L. ABBOT.

Miscellany.

CEREBRAL TUMOR MISTAKEN FOR HYSTERIA.

IN *Brain* (July, 1883,) an instructive case is described by Mr. Bruce, in which the symptoms were such as to lead to a diagnosis which was negated by the autopsy. The patient was a single woman, aged forty-five, a nurse. Had been well till 1880, cheerful, kindly, and a good nurse. Early in 1881, after taking care of a very restless child, she began to show signs of nervous trouble, was excitable and uneasy. A small tumor was removed from the breast, pronounced on good authority, after microscopic examination, to be benign. This was in June, 1881. The wound healed perfectly in four days. For a time after the operation she was very well. In August she began to grow very selfish, irritable, and jealous of her sisters; she would take fits of laughing and crying (especially the latter) for no apparent reason, and for a time she became so passionate as to be almost unbearable at home. In September, however, she was able to take a situation as a nurse, and for some nine months she seemed in perfect health. She had charge of a very delicate child that needed constant night attendance, so that for about nine months her sleep was constantly broken. In June, 1882, she began to get excitable, and to quarrel without cause with her fellow-servants; complained constantly of pains in the back, abdomen, and about one ovary, for which no local cause could be detected, and which were at the time considered hy-

terical. Finally her excitement became so great that she alarmed every one by rushing about the house at night screaming, and it was only by firm moral treatment that she could be induced to exercise self-control. She was seen by two physicians, who were of opinion that her case was one of hysteria, and recommended her removal to her own home. During one of her excited turns the first "fit" occurred, and she was said to have rung the bell to summon a fellow-servant to witness it. With rest at home the excitement passed greatly away. At the next period, in August, the second fit occurred; at the third, which occurred a week before time, and was excessive, a third "fit." Since this very slight ones had occurred three or four times on some days, and sometimes at night. She always knocked her sister up to see those at night, and those in the daytime were stated never to occur in the presence of certain friends, and always before certain others. One occurred during the author's first examination of the case, in September, 1882, and was said by patient and her sister to be quite similar to the others. She felt its onset, said, "There's one coming," grasped the doctor with her right hand, shut her eyes, threw her head back, arched her back a little. There was a slight trembling of the body, but no vaso-motor change nor frothing at the mouth. She answered a question put to her, showing (what she afterwards stated positively) that there was no loss of consciousness. The whole lasted for about thirty seconds, and was followed by no headache or any symptom except slight numbness, which passed off immediately. The "fit" did not seem epileptiform, but such as one sees frequently in hysterical subjects.

Though the history and behavior strongly suggested hysteria, careful search was made for evidence of intracranial lesion. There was found absolutely no alteration of sensibility of general or special sense (smell and taste were, unfortunately, not examined). Vision and accommodation good in both eyes. No hemiopia. Pupils equal, active, and of medium size. No ptosis; no strabismus. Ophthalmoscopically fundus healthy; no sign of past or present neuritis. All the reflex functions—tendon, skin, and organic—were normal. There was no headache, and patient said never had been. (Post mortem it was learned that she had, in June, complained of throbbing in the head.) No scalp percussion tenderness. Intellect clear; articulation unimpaired; could converse apparently without effort. Memory good. Her manner was excitable, and facial expression strongly suggestive of the hysterical temperament. Tongue slightly furred; slight constipation. Patient stated that she had never vomited. Otherwise no abnormality detected. There was no sign of, and no reason to suspect, syphilis.

Gross intra-cranial lesion being excluded, the diagnosis of hysteria was made, and in the middle of October, the fits having almost wholly ceased, except in the presence of certain friends, she was sent into the country on account of showing passionateness and jealousy toward other members of her family. There she seemed well, and wrote letters legible and well expressed. On November 17th she had a fit, the first since going to the country, and called a servant to witness it. That evening she became unintelligible, and talked nonsense. Two days later (November 19th) she was seen lying in bed; mouth to left; left occipito-frontalis weaker than right; slight convergent strabismus; weakness of right hand; legs equally strong; no

ptosis; pupils equal, active, of medium-size; no optic neuritis; sensibility, general and special, unaltered; speech peculiarly altered; no ataxic aphasia. Some leading questions correctly answered, to others an expression of stupidity, supposed at the time to be simulated. After the physician was gone she got up, walked for an hour, and made her bed without any impairment in the use of the right hand.

Next day in consultation no strabismus was found, *no twist of the mouth, no inequality in the two occipito-frontales or in the strength of the two hands or legs.* The grasp of the hands was fairly strong. The tendon and skin reflexes were, perhaps, slightly exaggerated, but equal on both sides. So far as could be judged, sensibility to touch, pain, temperature, on either side, was unaltered. Watch heard with right ear at one yard, with left at one yard and a half. The speech had still the same peculiar character, not easily described, but which suggested that she could answer when she liked, and when she did not know what was the proper answer to give she "hedged" or shammed to be stupid; thus she answered leading questions at once, and when asked on which leg she felt the prick of a pin best she said, "It's not so well on that leg as it's worse on the other." Her other remarks were somewhat similar. She seemed in all cases to understand the questions.

She was then ordered to the infirmary, but on the following day seemed quite well, said there was nothing the matter with her, and that she could be treated at home. Later she had a relapse, became violent, and struggled with her sister, showing no signs of weakness. At the visit three days before her death she was sitting by her bedside, with a stolid expression; otherwise she looked well. On being asked, "How are you to-day?" she answered with a rude stare, "Have you been sleeping?" and similarly to one or two other questions. It could not be determined whether she understood the questions, or whether she took this means of preventing any conversation. Some time afterward she looked as if she had discovered that she had made some mistake. She could walk quite well.

The resident physician adds that while she was in the infirmary for the first few days she seemed quite well, only hysterical, would not do what she was told, could only be induced to do light work, such as dusting the tables, and when the nurse was by her side, and did so then in a careless, indifferent manner, desisting the moment her back was turned. One day she vomited and spat into her soup, which she did not like; was supposed to have done this in order not to have to take it. When scolded for this did not repeat the offense except once, on the Saturday before death, when she spat into her tea. On admission talked quite correctly to the doctor and the staff nurse, would not do so to a probationer; after a few days began to be confused at the end of a sentence, would transpose words in a sentence, saying "Fine—the day," for "It is a fine day." Two days before death she frequently used wrong words, for example, "jube" for "hospital," and "a pair of legs" for "two pills." On the day before death her father did not observe anything remarkable in her speech. Once or twice she answered rudely, as it seemed, but on being checked for it gave correct replies. When asked to write what she wished her writing was unintelligible. She seems generally to have understood what was said to her,

and carried out complicated directions correctly. Two days before death, after being warned by the other patients that the nurse would be angry because she spat into her tea, and poured it on the floor, she went for a cloth and wiped it up. The day before death, at the morning visit, when told to arrange her hair, which she had left hanging about her shoulders, she did so at once. Two days before death she dragged sometimes one and sometimes the other foot slightly, and vomited once (next day, the 3d of December) quite suddenly when asked to walk round a table. During the night she did not sleep, but got out of bed often, folded and unfolded her clothes.

December 4th. On getting up in the morning she slipped to the ground, became unconscious, and, on being put to bed, remained as if sleeping quietly for four hours. Half an hour before death breathing became stertorous, and pulse could not be counted. There were no convulsions.

The autopsy showed a tumor extending from the left temporo-sphenoidal lobe to the junction of the anterior and middle third of the pons. Below the tumor was a hæmorrhage about as big as a hazel-nut. The basal ganglia were pushed inward with the internal capsule, and the convolutions of the temporo-sphenoidal lobe outwards. The cortex was not at all involved. The white matter of these convolutions was somewhat affected, a small part of the tumor spreading into the island. No microscopical examination of the tumor was made, owing to the method employed in the hardening.

The article as published contains figures clearly showing the locality of the tumor, with the dimensions in various sections, also a lithograph of a letter written about three weeks before her death, unintelligible for the most part, though many individual words are distinct; "hoping you (they, the children, etc.) are all well" seems to be the substance of each sentence.

USE OF THE MOXA IN JAPAN.

As I rode behind the naked-backed jinriksha coolies I noticed along each side of the spine, from the head to the hips, white, irregular scars, about the size of a dime, indicating, as I supposed, some skin disease, to which they are very subject from their diet and exposure when young. These were the marks left by the moxa, a household remedy, probably invented in Japan, — a painful and powerful agent, well known in modern surgery. It is made of the pith of a reed (*Artemisia*), mixed with powdered charcoal, in a conical form. This is ignited, applied to the skin, and allowed to burn slowly until extinguished. The flesh is severely burned, with the resulting scar alluded to. As if this were not sufficient to expel the "winds and vapors," which they and the Chinese believe to be the cause of all diseases, this is combined with acupuncture, the needle passing through the moxa deeply into the tissues, and conveying the heat to the supposed seat of disease. As they employ this every spring as a preventive measure, it is rare to see a coolie without these scars. The accoucheur calls it to his aid, and is directed to burn three cones on the little toe of the right foot to accelerate the operation of nature. Even infants are thus tortured. A child about three years old, suffering from a wasting diarrhoea, who had thus been uselessly tormented, was brought to me; the many wraps having been removed, a simple water

dressing and mild opiate brought the little creature round all right in two days.

SAMUEL KNEERLAND, in *Science*.

IODOFORM FOR FISSURE OF THE ANUS.

DR. THOMAS HAY, in a communication to the *Medical and Surgical Reporter* (April 14, 1883), strongly recommends the local use of iodoform in fissure of the anus as a substitute for operation by the knife or forcible rupture of the sphincter muscle on the ground that it is equally efficacious with the operative method of treatment and at the same time milder and safer. He says: "It may be dusted, in *very fine* powder, upon and into the fissured parts, or applied in the form of ointment or suppository. The application of the simple powders, if properly prepared, three or four times a day, after each evacuation, and in the intervals, is often sufficient. In some cases, however, the undiluted powder — although thoroughly powdered — causes some pain. In such the iodoform may be mixed with powdered gum acacia, if a powder be preferred, or may be made into an ointment with vaseline, or suppository with the oil of theobroma. Balsam of Peru, carbolic acid, and oil of peppermint, will moderate the intensity of the iodoform odor; but this can hardly be requisite for application in this situation. The application of the remedy may be followed by a little smarting, but soon after its use the sensibility of the parts becomes benumbed, and even defecation may go on without consciousness, so far as concerns the development of pain during or after the process."

THE CHANGE OF MEDICAL OPINION IN REGARD TO THE CAUSE AND RECENT EXTENSION OF MALARIA.

A RECENT paper by Dr. Charles P. Russel, of New York, an authority on matters of hygiene and endemic diseases, is published in the *Medical Record* (August 18th), and is quite iconoclastic as regards the heretofore accepted ideas of this disease. After alluding to conflicting and unsatisfactory results of those who have thought to find a specific germ, a *bacillus malarie*, the writer frankly admits the complete failure to answer the question, What is the nature of the malarial cause? He adds: —

"In the August (1876) number of the *Popular Science Monthly* I published a brief account of the views then entertained almost universally as to the conditions from which malaria was regarded as springing, views in which, at that time, I concurred. Since then, however, I have been forced to materially modify my opinions on this subject. During a conversation some few years since with the late Dr. Hayes, the Arctic explorer, I was surprised to learn that malarial disease was not unknown in certain Arctic regions where the summer temperature almost never rose above 60° F., with an average for the warmest month of only about 45° F. Dr. Hayes himself had treated several cases of intermittent fever among the natives there. This disposed at once of the tradition that an average summer temperature of at least 59° F. is one of the essential factors in the causation of such disorders.

"Investigating the subject more thoroughly, I found many instances of the occurrence of malarial diseases in other places where vegetable decomposition was, to any great extent, impossible; and very many more in-

stances exist, as everybody knows, of spots where all the so-called conditions for the production of the malarial poison have always been present without such poison ever having manifested itself; and others still, in which, under similar circumstances, it has appeared only at rare intervals. The doubts thus excited were subsequently corroborated during a professional connection with several cases of mill dams alleged to have produced malaria, one of which I will allude to hereafter. Within a few years the assumption of the truth of the convictions upon this subject entertained by most physicians and hygienists has been the basis for a war upon mill-dams in the Middle and Eastern States. Assuming that the exposure periodically, by drawing off water, of lands contiguous to a stream, and, in fact, forming a portion of the river-bed when the mill-dam was full—such drawing off of a certain quantity of water laying bare a considerable area of submerged ground covered with vegetable growth—and that the action of the summer sun upon such vegetation must inevitably create malaria—there could be little question as to the deleterious influence of any mill-dam within certain latitudes upon the health of the neighboring community. But, unfortunately for this theory, there are thousands of mill-ponds within the specified regions of average summer temperature, presenting every prescribed condition for the creation of malaria, in whose vicinity chills and fever have always been unknown as much as yellow fever or the plague.

"In this connection it is proper to recall the fact that since the United States census of 1870 there has been particularly noticed an evident extension of the subtle miasmatic influence over regions previously exempt from it within the Middle and New England States. The additional effect of this disease-wave upon the naturally malarious site of New York City alone in this period was exhibited in the fact that from 1868 to 1872 the number of annual victims to these fevers increased three hundred and fifty per cent. It is well known that in places previously exempt from them miasmatic fevers occasionally appear and disappear without there having taken place any perceptible changes in the relations of the soil. Sometimes such fevers assume a widely epidemic or pandemic character, appearing to have broken loose from their native haunts in order to invade a great extent of territory. Thus, as Hertz and Proust inform us, the continent of Europe was almost entirely overspread by such pandemics in 1558, 1678, and 1679; from 1718 to 1722; from 1808 to 1811; from 1824 to 1827, and from 1845 to 1848. That the cause of malaria being thus disseminated is equally mysterious with that of most epidemics few will venture to deny."

Dr. Russel further cites localities that are essentially malarious, where, as far as known, malaria *has always existed*, and analogously always will. Manhattan Island together with its surroundings—Westchester County, Northern Long Island, and Eastern New Jersey—present the most familiar examples. While in some portions of these territories the existence of swamps and overflowed lands does appear to bear a positive relation to malarial affections, and their drainage does seem to be followed by a *diminution* of such diseases (*never, however, by their entire suppression*), in other instances the drainage of such places has been succeeded by a positive increase, rather than a subsidence of miasmatic troubles. We are, therefore, placed in a dilemma as regards the influence of drainage in

exterminating malaria. On the other hand, whether in miasmatic regions or elsewhere, he does not presume to deny that *thorough* drainage has a beneficial effect upon the *general* public health, when we consider the large category of diseases. But this result proves nothing as to the *cause* of malaria.

Again, there are elevated lands, even lofty mountains and extensive dry sandy plains, where none of the so-called conditions for malaria can be discovered in simultaneous operation, but where malaria is virtually constant. Such instances are very numerous, and stagger even the most ingenious of the swamp and germ theorists. To these gentlemen it may seem almost sacrilege that any intelligent reader and observer should become an iconoclast as to the idols which ages of study have built up for all future worship; nevertheless, so it is; and it is significant that some of the most distinguished scientific men have lately abjured the orthodox opinions in regard to the essential conditions for the production of malaria. In a *cause célèbre* tried at Pittsfield, Mass., in October, 1882, on account of an indictment brought against the owners of a mill-dam for creating malarial fevers, Dr. Paul A. Chadbourne, President of the Massachusetts Agricultural College, and ex-President of Williams College, testified that, as a professor in the Berkshire and Maine medical schools he had formerly lectured upon the nature of malaria. He then believed it to be of gaseous character, due to heat and decomposition of vegetable material, but he had since entirely abandoned that theory, and adhered to no opinion whatever, based upon sufficient facts to make it valuable, as to how malaria arises. Other eminent physicians and hygienists similarly confessed at this trial that after having formerly held the marsh and germ theories, they had recently given up both.

It is discouraging to be thus obliged to tear down what little we thought had been properly built up of a theory of disease, but if it is a faulty substructure the sooner it is out of the way the better, even if it leaves without a stone to stand upon.

CHARCOT ON SOME LOCAL NERVOUS MANIFESTATIONS.

THE *Birmingham Medical Review* for August publishes a short abstract of some of Professor Charcot's writings on certain local nervous affections whose manifestations belong rather to the department of surgery than of medicine. We reproduce one or two of these extracts. Regarding

LOCAL HYSTERICAL AFFECTIONS

Professor Charcot says that it is well known how a blow, or pressure, or other local cause, may determine the development of some manifestation of a diathetic disorder, such as rheumatism, gout, or syphilis, but it is not so well known that the local phenomena of hysteria manifest themselves in the same way under similar influences. This important fact was recognized by Sir B. Brodie, who has illustrated it by cases in his lectures on Local Nervous Affections. "In a case," says Brodie, "which is of no unfrequent occurrence, a young woman pricks her finger, or perhaps the finger is merely pinched. Soon afterwards she complains of pain extending from the finger upwards along the hand

and fore-arm. This probably is followed by a convulsion, contraction of the muscles of the arm, or by a continued contraction of the flexor muscles on the anterior part of the arm, so that the fore-arm is kept permanently bent; at least while the patient is awake, for the spasm is generally relaxed during sleep."

Professor Charcot relates a case in which spasmodic contraction of the wrist and hand followed an injury to the back of the hand from falling against a stool. There was complete anæsthesia of the whole hand, wrist, and lower half of the fore-arm. She was seen in consultation six weeks after the accident, and five days later the hand recovered spontaneously.

In another case a squeeze of the right fore-arm, causing some swelling and ecchymosis, was followed by severe pain, especially on attempts at motion, with rigidity of the hand, the two proximal phalanges of the four inner digits being flexed at an obtuse angle, and the distal phalanges extended. The contraction disappeared suddenly, and was followed by complete paralysis of motion and sensation affecting the whole upper extremity, and later on this extended to the lower extremity, though the paralysis of motion was less complete. There was complete right hemi-anæsthesia affecting common and special sensation, including vision and smell, and there was marked tenderness in the right ovarian region. From this time a number of hysterical symptoms manifested themselves, — dyspnoea, vomiting, convulsive cough, retention of urine, etc.

The usual symptoms of traumatic local hysteria are (1) exquisite cutaneous hyperæsthesia; (2) deeper pains in the course of nerve trunks or in the interior of joints; (3) contractions. These symptoms do not remain limited to the part affected, but may extend to the whole limb. They are liable to spontaneous exacerbations, during which there may be, in addition, swelling, redness, and elevation of temperature.

Such symptoms are usually the first indication of the hysterical diathesis, hitherto latent. When ovarian hysteria is fully developed, mechanical injuries no longer appear to produce these effects.

The diagnosis of such cases is always difficult, and the treatment should be, as far as possible, negative. Blisters and cauteries, galvanization and faradization, prolonged rest, and attempts at reduction, etc., are generally all productive of more harm than good.

THE SIGNIFICANCE OF DOUBLE SCIATICA.

In a recent clinical lecture Professor Charcot described the case of a woman, aged sixty-one, who had been operated on several times for scirrhus of the breast. She developed severe double sciatica, with pain in the region of both anterior crural nerves. The pains were exasperated by the erect position, so that walking became impossible. There was tenderness in the lumbar and sacral region of the spinal column, but there was no muscular atrophy, alteration of reflexes, or disturbance of the functions of the bladder or rectum. Professor Charcot insisted that double sciatica is always symptomatic, and the causes are (a) diabetes; (b) certain spinal diseases, for example, locomotor ataxy and meningo-myelitis; and (c) some alteration in the nerves themselves. There was no sugar in the urine, nor any evidence of those spinal affections; and in the absence of any sign of a tumor in the pelvis the readiest explanation was cancerous invasion of the vertebral column, causing pressure on the nerves. Secondary cancer of the spinal column was held by Ca-

zalis to be very common, especially after scirrhus of the breast, but it may be also met with in cancer of the stomach. In practice it is important to note that the presence of double sciatica in cancerous patients indicates metastasis, and contra-indicates operative interference. Conversely, severe neuralgic pains in patients at the age for cancer should suggest a careful examination of the breasts, the stomach, and the uterus. Such pseudo-neuralgic pains are the ordinary clinical signs of vertebral cancer, but a fungous mass may project from the spine, in which case the vertebrae will be infiltrated, and the consequences will be similar to those of Pott's disease.

SURGICAL EXPEDIENTS IN EMERGENCIES.

We reproduce from *The Polyclinic*, one of the ablest of the new candidates in the field of medical journalism, the following extracts from an ingenious and instructive paper by R. J. Levis, M. D. :—

It is in the experience of every surgeon to be occasionally obliged, in the absence of ordinary means and appliances, to devise resources available at the moment. Such occasions bring the practical character of the surgeon to the test, and on his readiness for the emergency may depend the relief of suffering or the averting of a fatal termination. His reputation, too, may, at such times, stand in the balance of good or ill report, to be turned happily in his favor or gravely against him.

The exigencies of active surgical practice have frequently obliged me to rely on hastily devised resources, and I trust that the record of some of them which I recall may possibly be of benefit to the profession and a relief to human suffering.

The necessity for *evacuating an over-distended bladder* is liable to become immediately urgent on occasions when a catheter is not quickly attainable. It is remarkable how often the condition is overlooked by practitioners until it becomes one of suffering and danger, demanding instant relief. The continued dribbling that often occurs from an almost bursting bladder may mislead or blind one to the grave danger. The absence of a catheter on one such pressing occasion led me to contrive a ready means of evacuating the urine. The recourse was to a piece of iron bell wire, bent double on itself, and the blunt doubled end passed readily through the urethral tract to the bladder. The distention of the urethra by the doubled wire allowed the urine to freely pass between the wires.

A *female catheter* may be extemporized from a short piece of rye straw, the end of which is to be closely wrapped for a short distance with thread; or the end of the straw may have its sharpness removed by dipping into melted sealing wax. The stem of the ordinary clay tobacco pipe is also efficient for the purpose. Such crude substitutes, when oiled, are readily introduced.

The *operation of venesection* would probably be more frequently resorted to when needed if a proper lancet, in perfect order, were at hand; but the critical time for relief of an actively congested or inflamed lung or brain is sometimes allowed to pass for want of a ready and certain method of opening a vein. I once, on a pressing occasion, bled a patient at the bend of the elbow, with perfect ease and precision, with but a blunt-pointed and dull pocket-knife, by resorting to a simple,

convenient expedient. Having put on the usual constricting bandage to distend the veins, I first transfixed the most prominent vein with a fine needle. Thus held securely, it was very easy, with even the dull knife, to cut a valvular incision into the vein, and the blood flowed freely.

For the arrest of nasal hæmorrhage I know of no device so good as one that may be readily extemporized with a strong piece of cord and some small pieces of sponge. The cord is tied securely to a piece of sponge, cut rounded, and just large enough to be forced backwards through the nostril. Then a number of similar pieces of sponge, with a hole through the centre of each, are threaded successively on the cord. The sponge on the end of the cord is then pushed, with a probe or dressing forceps, through the nostril, quite back to the faucial orifice; and the rest of the threaded pieces of sponge are slid back, one at a time, until the nares is tightly filled. When the patient becomes secure against a repetition of hæmorrhage the plugging is readily removed, one piece of sponge being withdrawn at a time, with the dressing forceps. The posterior nares may also be easily plugged by introducing either a slender gum bougie or a piece of thick catgut string, with a cord attached, through the nares, catching one end of it in the fauces with forceps, and drawing it forward through the mouth. To the cord which follows, a piece of sponge or pledget of lint is tied, to be drawn up into the posterior nares.

A method of making unirritating and painless pressure within the nares, in cases of obstinate epistaxis, is by a piece of the intestine of a chicken or other small animal, about twelve inches long, partially filled with either air or water. One end of the intestine is, while empty and collapsed, pushed backward through the nares; when thus lodged the air or water in the other end is forced, by compression with the hand from the pendulous portion, into the part lodged in the nares. Strong, equable compression can thus be made, rendering hæmorrhage impossible.

In a case of hæmorrhage from the intercostal artery, from homicidal stabbing, I arrested the flow immediately by making pressure within the pleural cavity, directly on the vessel, by introducing into the wound the handle of a door-key. The key was then turned transversely, so as to make direct pressure, and maintained in that position for some hours, until there was no more tendency to hæmorrhage. The same mechanical action might be effected by the similar use of the handle of an ordinary gimlet.

As a very efficient substitute for *Esmarch's elastic bandage*, I suggested, some years ago, in an article in the *Philadelphia Medical Times*, the use of a bandage made from ordinary flannel, cut bias, so as to increase its elasticity. Such an elastic bandage, from a material almost everywhere at hand, is, I know from experience, perfectly effective.

The hæmostatic action of hot water does not seem to be sufficiently known and appreciated among practitioners. It is so effective, and can be so readily applied, that it may well displace from practice all other hæmostatics. Water at a temperature not beyond tolerance of the immersion of the hand in it, which is a temperature of from 115° F. to 120° F., is ordinarily all that is necessary; but in some cases not amenable to treatment by the ligature, a temperature above 160° F., the coagulating point of albumen, may be necessary.

The absence of a tenaculum may be well replaced by a small fish-hook secured to a pen-holder.

For dislodging a foreign body in the œsophagus by forcing it downward, an ordinary carriage or riding whip, knotted far enough from the end to insure the proper degree of flexibility, may be an efficient expedient in an emergency.

Materials for splints for the temporary dressing of fractures can be at almost all times extemporized from the materials of wooden boxes and binders' boards. To dress fracture of the fore-arm and of the leg, in a case required to be removed to a distance from the scene of the accident, I once improvised an efficient dressing by breaking into strips some ordinary palm-leaf fans, which were at hand, and bound them on the limbs. I commend the material for its merits of being elastic and conformable to the shape of the limb. Good temporary dressings can also be made from common straw, cut to proper length and bound in layers on the limb.

For a readily made fixed dressing, a plan I have resorted to is with ordinary sand-paper as the material. The sand-paper is dipped into warm water, to soften the paper and glue, and it is then applied and retained with a bandage. The glue of the sand-paper soon gives rigidity; body and firmness are produced by the sand and paper. Strong fixed dressings, it should be remembered, can be readily prepared with the familiar domestic commodities of starch, or with the combination of eggs and flour.

In removing a patient with a fractured thigh or leg, the uninjured limb can be made to temporarily act as a splint and take care of the injured one, by simply bandaging the limbs together.

Many surgical instruments are made after traditionally complicated forms. Scalpels, bistouries, and needles should not be crooked. I know of no use for curved knives, and the occasions for the use of curved needles may be limited to a few plastic procedures in cavities. The ordinary surgical needle, with its absurd and inconvenient curve, I long ago discarded in favor of the more efficient, simple, and cheap glovers' needles. A good surgical needle can be readily made from an ordinary sewing needle, broken off above its point and ground to such an oblique point as is given to the hollow needle of the hypodermic syringe.

A common gimlet is an efficient instrument for opening the mastoid cells, in cases of abscess, when there is grave threatening of cerebral complication, demanding prompt action.

The patient use of a carpenter's rasp may safely substitute the trephine, in cases of fractured skull, by cutting away an angle or edge of bone at the point of fracture, and allowing an elevator, such as a small screw driver, to be inserted beneath a depressed fragment.

In regard to the traditional forms given to instruments, I have inquired of different instrument makers why the sharp, triangular point is made on the ordinary silver probe, but it remains unexplained. I have never seen any surgeon use this curious bayonet-point of a probe, and know of no possible use for it.

The facility with which rectal injection can be performed with large quantities of fluids, by hydrostatic pressure, renders not essential the use of a syringe, if a piece of India-rubber tubing long enough can be obtained. The lower bowels may also be distended, in cases of intussusception, by injecting water and car-

bonic acid gas, forced from the ordinary mineral water bottle or siphon, fitted to the rectal tube.

For antiseptic use many readily procured substances may well replace carbolic acid. None is so cheap and efficient as that most neglected preventer of putrefaction, sulphurous acid, made simply by exposing water to the fumes of burning sulphur in a close chamber. The antiseptic action of a saturated watery solution of turpentine has also the advantage of convenience of procurement and cheapness. For this purpose turpentine should be kept continually in water and exposed to warmth, and frequently agitated. Diluted alcohol

has merits as an antiseptic which have not received proper attention.

Recent investigations have proved that the bichloride of mercury is the most powerful of all germicides, and that it can be used effectively in unirritating dilutions of one part to two thousand or more of water. These readily obtainable substances prevent the decomposition of animal matters, and, without disputing over the germinal, chemical, or other theories of their action, all surgeons must admit that putrefaction is the most common factor in preventing the healing of wounds, and that it should be avoided.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 18, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	673	295	25.46	12.90	21.45	3.45	3.60
Philadelphia.....	846,984	418	193	27.36	11.28	12.72	4.20	8.88
Brooklyn.....	566,689	302	157	61.06	10.92	30.78	2.98	1.99
Chicago.....	503,304	213	139	48.78	8.44	29.08	4.69	6.20
Boston.....	362,535	208	101	36.00	13.92	23.52	1.92	5.28
St. Louis.....	350,522	163	76	31.26	6.13	15.33	4.29	5.52
Baltimore.....	332,190	135	67	32.56	14.80	17.76	2.22	6.66
Cincinnati.....	255,708	92	37	18.46	10.86	11.94	1.08	1.08
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	96	47	25.00	14.58	16.68	—	2.08
Pittsburg.....(1883)	175,000	68	33	29.40	14.70	16.17	4.41	1.47
Buffalo.....	155,137	92	53	47.78	9.77	40.18	2.16	1.08
Milwaukee.....	115,578	65	47	16.94	6.16	13.86	—	1.54
Providence.....(1883)	116,755	44	19	29.51	18.16	26.24	—	2.27
New Haven.....(1883)	73,000	32	16	31.25	12.50	18.75	9.38	—
Charleston.....	49,999	35	13	17.14	17.14	11.43	—	—
Nashville.....	43,461	23	4	30.45	8.70	17.40	4.35	—
Lowell.....	59,485	32	18	37.50	12.50	31.25	3.12	3.12
Worcester.....	58,295	17	6	29.40	17.64	23.52	—	5.88
Cambridge.....	52,740	19	6	10.52	10.52	—	10.52	—
Fall River.....	49,006	32	16	34.37	3.12	28.13	3.12	—
Lawrence.....	39,178	15	9	33.33	13.33	20.00	—	6.66
Lynn.....	38,284	17	10	35.28	35.28	29.40	—	—
Springfield.....	33,340	14	3	21.42	28.56	21.42	—	—
Salem.....	27,598	—	—	—	—	—	—	—
New Bedford.....	26,875	12	6	25.00	16.66	25.00	—	—
Somerville.....	24,985	12	—	—	25.00	—	—	—
Holyoke.....	21,851	8	4	62.50	—	37.50	—	12.50
Chelsea.....	21,785	5	3	20.00	20.00	—	—	—
Taunton.....	21,213	7	4	14.28	14.28	14.28	—	—
Gloucester.....	19,329	8	3	12.50	25.00	—	—	12.50
Haverhill.....	18,475	9	6	44.44	11.11	33.33	—	—
Newton.....	16,995	7	2	14.28	14.28	14.28	—	—
Brookton.....	13,608	1	0	—	—	—	—	—
Newburyport.....	13,537	4	3	50.00	—	50.00	—	—
Fitchburg.....	12,405	2	1	50.00	—	50.00	—	—
Malden.....	12,017	9	5	44.44	22.22	22.22	—	—
Twenty-three Massachusetts towns.	185,273	90	40	34.44	25.55	28.88	4.44	—

Deaths reported 2979 (no report from New Orleans): under five years of age, 1442: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 1093, diarrhoeal diseases 735, consumption 368, lung diseases 163, diphtheria and croup 123, typhoid fever 72, malarial fevers 45, scarlet fever 41, whooping-cough 28, measles 24, cerebro-spinal meningitis 12, puerperal fever 10, erysipelas three. From malarial fevers, New York 23, Brooklyn nine, Philadelphia and St. Louis four each, Charleston two, Chicago, Baltimore, and Nashville one each. From scarlet fever, Chicago ten, New York, Boston, and Baltimore five each, St. Louis four, Philadelphia three, Cincinnati and District of Columbia two each, Brooklyn, Pittsburg, Buffalo, Cambridge, and Lynn one each. From whooping-cough, New York 11, Chicago four, Brooklyn three, Cincinnati, District of Columbia, and Pittsburg two each, Boston, St. Louis,

and Buffalo one each. From measles, New York 13, Brooklyn, Boston, Baltimore, and Pittsburg two each, New Haven, Lawrence, and Chelsea one each. From cerebro-spinal meningitis, New York, Chicago, Buffalo, and Malden two each, Milwaukee, Fall River, Haverhill, and Westborough one each. From puerperal fever, Boston three, Chicago and St. Louis two each, Philadelphia, Brooklyn, and Nashville one each. From erysipelas, New York two, Brooklyn one.

Two cases of small-pox were reported, in St. Louis; typhoid fever 23, diphtheria 17, scarlet fever 17, and measles two in Boston; scarlet fever eight, diphtheria seven in Milwaukee.

In 42 cities and towns of Massachusetts, with an estimated population of 1,196,174 (estimated population of the State 1,922,530), the total death-rate for the week was 22.86 against 25.72 and 26.53 for the previous two weeks.

In the 28 greater towns of England and Wales, with an esti-

mated population of 8,620,975, for the week ending August 4th the death-rate was 20. Deaths reported 3296: diarrhoea 305, acute diseases of the respiratory organs (London) 168, measles 139, scarlet fever 95, whooping-cough 49, fever 47, diphtheria 22, small-pox (London, Birmingham, Sunderland and Newcastle one each) four. The death-rates ranged from 9.7 in Plymouth to 33.2 in Newcastle-on-Tyne, Birkenhead 11.2; Halifax 15.2; Norwich 17.5; Leicester 18.1; Bradford 19.1; London 19.3; Birmingham 20.2; Sheffield 20.3; Leeds 22.6; Manchester 23.4; Liverpool 28. In Edinburgh 20.3; Glasgow 24.9; Dublin 17.2.

For the week ending July 28th, in 172 German cities and towns, with an estimated population of 8,754,694, the death-rate was 28.8. Deaths reported 4857; under five years of age, 2935; diarrhoeal diseases 510, consumption 505, lung diseases 312, diphtheria and croup 139, measles and röteln 82, scarlet

fever 77, typhoid fever 54, whooping-cough 50, puerperal fever 18, small-pox (Heilbronn one) one, typhus fever (Königsberg one) one. The death-rates ranged from 13.0 in Erfurt to 41.6 in Berlin; Königsberg 31.8; Breslau 33.6; Munich 37.7; Dresden 29; Leipzig 28.5; Hamburg 20.5; Cologne 28.7; Frankfurt a. M. 16.7; Straasburg 25.8.

For the week ending August 4th, in the Swiss towns, there were 27 deaths from diarrhoeal diseases, consumption 21, lung diseases seven, diphtheria and croup five, measles three, whooping-cough two, puerperal fever two, typhoid fever one. The death-rates were at Geneva 11.3, Zurich 16, Basle 30.5, Berne 20.13.

The meteorological record for the week ending August 18th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
August, 1883.																			
Sun., 12	29.957	63	68	57	81	78	93	84	NE	NE	N	9	12	10	O	F	O	—	—
Mon., 13	29.876	70	86	56	87	49	93	76	W	SW	SW	4	10	11	C	T	F	—	—
Tues., 14	30.107	67	76	62	73	62	73	69	W	E	W	10	9	6	O	F	F	—	—
Wed., 15	30.297	63	70	55	65	68	75	69	N	E	SE	6	11	3	F	O	O	—	—
Thurs., 16	30.096	60	65	55	93	100	93	95	NE	NE	NE	6	12	8	O	R	O	—	—
Fri., 17	30.015	66	78	54.5	93	56	90	80	NW	SW	SW	7	10	8	O	F	O	—	—
Sat., 18	29.977	74	85	62	84	49	90	74	SW	SW	SW	3	11	9	O	O	O	—	—
Means, the week.	30.046	66.1	86	54.5				78.3										7.40	.32

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 17, 1883, TO AUGUST 24, 1883.

CLEMENTS, BENNETT A., major and surgeon. Relieved from duty with the Army Medical Examining Board, New York City, N. Y. Paragraph 11, S. O. 193, A. G. O., August 22, 1883.

MIDDLETON, J. V. D., major and surgeon. Relieved from duty at Fort Hays, Kansas, and assigned to duty at Fort Leavenworth, Kansas. Paragraph 2, S. O. 169, Department of the Missouri, August 18, 1883.

WILLIAMS, JOHN W., major and surgeon. Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 1, S. O. 109, Department of the Columbia, August 8, 1883.

BARTHOLOMEW, JOHN H., captain and assistant surgeon. Assigned to temporary duty at Vancouver Barracks, W. T. Paragraph 2, S. O. 109, Department of the Columbia, August 8, 1883.

FINLEY, J. A., captain and assistant surgeon. Relieved from duty at Fort Concho, Texas, and assigned to duty at Fort Stockton, Texas, as post surgeon. Paragraph 1, S. O. 101, Department of Texas, August 16, 1883.

KIMBALL, JAMES P., captain and assistant surgeon. Relieved from duty in Department of the Platte, and to proceed to New York City, and report in person to the President of the Army Medical Examining Board for duty as a member of that board vice Surgeon Clements, relieved. Paragraph 11, S. O. 193, A. G. O., August 22, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING AUGUST 25, 1883.

AUSTIN, A. A., assistant surgeon, ordered to Naval Hospital, New York.

CRAIG, T. C., assistant surgeon, detached from the Naval Hospital, New York, and ordered to the U. S. S. Minnesota.

CRAWFORD, M. H., passed assistant surgeon, detached from the U. S. S. Pinta, and placed on sick leave.

WILLSON, W. G. G., passed assistant surgeon, detached from the Minnesota, and ordered to the Pinta.

WHITE, CHARLES H., surgeon, ordered to the Museum of Hygiene, Washington, D. C.

BRYAN, J. H., passed assistant surgeon, detached from the Museum of Hygiene, and ordered to the Miantonomoh.

GUITERAS, D. M., passed assistant surgeon, ordered to the Navy Yard, Pensacola, Fla.

BOOKS AND PAMPHLETS RECEIVED.—Transactions of the South Carolina Medical Association. Thirty-Third Annual Session. Held in Yorkville, S. C., April 25 and 26, 1883.

Report of Proceedings of the Illinois State Board of Health. Quarterly Meeting, Springfield, June 29, 1883.

Answers to Practical Questions on the Subject of Diphtheria. Reprinted from Therapeutic Gazette.

The Sanitary Engineer. Bound Volume No. VII. December, 1882, to May, 1883.

Fourth Annual Announcement and Catalogue of the Northwestern Medical College of St. Joseph, Missouri. Session 1883-1884.

On Nasal Cough and the Existence of a Sensitive Reflex Area in the Nose. By John N. Mackenzie, M. D., of Baltimore, Md., Surgeon to the Baltimore Eye, Ear, and Throat Charity Hospital. (Reprint.) 1883.

A New School Physiology. By Richard J. Dunglison, A. M., M. D., Author of The Practitioner's Reference Book, etc. Illustrated with 117 Engravings. Philadelphia: Porter & Coates.

Excision of the Knee-Joint. With Report of 28 Cases. Illustrated by 13 Photo-Lithographs and Wood Engravings. By George Edgeworth Fenwick, M. D., C. M., Professor of Surgery, McGill University, etc. Montreal: Dawson Bros. 1883.

Closing Exercises of the Practitioners' Course of Lectures. Delivered in the Spring of 1883 in the Hahnemann Medical College and Hospital of Chicago, Ill.

Transactions of the Medical Society of the State of West Virginia. Sixteenth Annual Session. Held in Grafton, May 16 and 17, 1883. Wheeling. 1883.

Eighth Report of the Salem Hospital. Salem. 1883.

Original Articles

RECENT INVESTIGATIONS INTO THE PATHOLOGY OF SO-CALLED CONCUSSION OF THE SPINE,¹

WITH CASES ILLUSTRATING THE IMPORTANCE OF SEEKING FOR EVIDENCES OF TYPICAL HYSTERIA IN THE CHRONIC AS WELL AS IN THE ACUTE STAGES OF THE DISEASE.

BY JAMES J. PUTNAM, M. D.

THERE are few kinds of disease with regard to which the interpretation of evidence is of so much importance as compared with the simple accumulation of evidence as in the case of the so-called concussion of the spine.

A man is bruised and shaken up by a severe fall or the jar of a railway collision. When we see him his limbs may appear to be more or less completely paralyzed, or he complains of extreme pain which is aggravated by the slightest motion, while his expression of distress proclaims him to be a very sick man, and enlists our anxiety and our sympathy in his behalf. By what signs can we discover whether he is really suffering from a serious, if not incurable, affection of the nervous centres, to which many of the symptoms point, or whether his case is one of those which are susceptible of considerable and even rapid improvement, especially after the conclusion of legal complications?² This question is often hard enough to answer, and the difficulty is still greater if the patient has recovered from the immediate effects of the injury so that we have only his own word to vouch for the reality of his complaints.

Fortunately, it seems to be becoming more and more apparent that the real difficulty in the way of diagnosis lies not so much in the obscurity of these cases themselves as in the fact that the greater part of them belong to a type of disease which has not until of late years been intimately studied. The profession has not even yet generally agreed upon such a classification of symptoms as would enable us to separate the essential from the non-essential, the serious from the trivial, and the appearance of suffering presented by the patients is sometimes so impressive that the temptation is too strong to be resisted to judge each case on what we conceive at the moment to be its true merits instead of trying to refer it to some relatively familiar class of diseases, and reasoning about it as from the greater to the less. On the other hand, in the more chronic cases the apparent absence of tangible signs of disease, combined with a suspicion that the sickness is being feigned for damages' sake, has undoubtedly often led to an underestimate of the patient's real disability. For this state of affairs the retention in medicine of the term "spinal concussion" is certainly in part responsible in that it satisfies in a measure the imagination, and excuses the clinical observer from seeking for a more rational explanation of the symptoms which are brought to his notice. The expression is no doubt convenient, and has served a useful turn, but it is

¹ Read before the Boston Society for Medical Improvement, May, 1883.

² Mr. Page, in his recent *Injuries to the Spine*, to be referred to later, dwells particularly on the important point that a rapid improvement after the settlement of legal claims is by no means a proof that the patient's symptoms were imaginary or assumed, an inference which is often unjustly drawn.

worth while to recognize occasionally that as a diagnosis it has no real meaning. In spite of all the attention which has been given to the subject we know of no pathological state of the spinal cord to which the name of concussion could properly be applied, and it is evident that some at least of the symptoms usually designated by it can be grouped under other headings.

The interesting paper read before this Society by Dr. Hodges in January, 1881, was a move toward the adoption of a more rational classification, and our lines can now be pushed out a little further. Whereas Erichsen uses the expression "spinal concussion" almost indiscriminately for the cases of organic and those of functional character. Dr. Hodges thinks that the former can and should be separated from the latter, and designated by their proper pathological name, as myelitis, meningitis, etc., which at once invests them with a clinical history and prognosis on which we can reckon.

Still more recent investigations to which I shall refer, limit very materially the part played by organic disease, showing that it is of the very rarest occurrence in cases of injury from simple jar. At the same time it can, I think, be made probable that the group of functional cases is capable of further classification, and that some of them at least can be proved beyond the possibility of deception to be examples of that important neurosis which is called hysteria, a term which, thanks to the labors of Charcot and his pupils, has vastly outgrown its old and vague meaning, and is constantly acquiring a more precise and practical significance. The term "concussion of the spine" is even more conspicuously a misnomer from the fact that it calls away the attention from the more recent investigations into the real pathology of the affection at stake.

Thus it is probable that in the production of many of the hysteroid symptoms it is a disturbance of cerebral rather than of spinal functions which is at fault, and it has been plausibly suggested that both spinal cord and brain suffer for the most part only secondarily, as a result of changes in blood pressure, which in their turn are due to the concussion of the great abdominal organs with their nerves and ganglia.

Within the past year an exceedingly valuable book has appeared, by Mr. Herbert Page, surgeon to the London and Northwest Railway, in which a thorough and critical analysis is made of the literature of the subject, and 250 new cases are reported in tabular form out of a much larger number which the author has observed in support of the conclusions which he draws.

The opinion of prime importance at which Mr. Page arrives is that it is an event so rare as to constitute a marked exception to the rule for the spinal cord to receive any injury in concussion accidents, however severe, so long as the bony canal which protects it, as no other organ in the body is protected, remains intact.

Where such injury does occur, as has been attested by unequivocal clinical signs, the history of the case is not that of simple concussion, and the termination is almost always fatal. Conversely, he would maintain that cases of the kind usually considered typical of concussion do not, except in the rarest cases, show unequivocal signs of spinal injury or disease. Scarcely a single autopsy proving such an injury is in fact on record.

I gather from carefully reading the book that in the opinion of the author a classification of the following

sort might be made of the cases of organic injury of the cord:—

(1.) Those directly or indirectly due to fracture or displacement of vertebræ.

(2.) A very few cases where the cord has sustained manifest and usually fatal injury without apparent lesion of the vertebral column.

Such cases as these are not observed among those originating in the jar of a railway collision, but are due to such accidents as a fall from a great height or a severe blow, localized at some one point of the back, or to a sudden or severe bending of the body. In all of them the symptoms of spinal-cord disease are unequivocal, and make their appearance immediately after the accident. The writer is inclined to believe that in the majority of the cases in which unequivocal symptoms show themselves which pass entirely away after a moderate time, too short for a myelitis to run its course, the cord is probably suffering from the pressure of a hæmorrhage which is soon absorbed. Besides these cases of undoubted injury, a few have been observed in which death followed after a short time and in which no lesion could be found in the spinal cord, as in the instance so often referred to as observed by Leyden, and one reported by Bastian in which death occurred after a lapse of five months. In this case no changes were discovered with the naked eye, but the microscope revealed pretty extensive and diffused lesions which Bastian considers to be the results of material interference with the circulation in the small vessels, due, he believes, to pressure upon them from blood effused into their sheaths through rents in their walls.

It is also probable that chronic degenerative affections of the cord, such as locomotor ataxia, or other forms of sclerosis, are occasionally of traumatic origin, and Dr. R. T. Edes has reported several instances of this sort. Perhaps Mr. Page underrates the frequency with which these cases occur, even as a result of railway accidents; but certainly they are comparatively rare.¹

There remains for consideration the vast mass of cases of the kind seen after ordinary concussion accidents, presenting symptoms which sometimes lead competent observers to diagnose chronic myelitis or meningitis.

The special service which Mr. Page has rendered lies in subjecting this diagnosis to a searching examination, in the course of which he shows (1) that a favorable termination of these cases is far more common than our knowledge of the serious diseases referred to would lead us to expect; and (2) that the affections to which concussion accidents unquestionably do give rise, such as reflex functional disorders, sprains of muscles and ligaments and the like, are capable of simulating to a remarkable degree real organic diseases of the cord.

This latter fact has, of course, been insisted on by various writers, but not before, so far as I know, supported by such a weight of evidence. And this is, after all, the important point; for, although every one is aware that in going to a case of this kind, he is liable to meet with symptoms, really not serious, which may closely simulate disease of the spinal cord or

membranes, he is usually not aware *how great* this liability to error is; and no one can fail to be impressed with Mr. Page's opinion that real injury of the spinal cord or its membranes, in railroad accidents at least, is almost an unknown occurrence.

In investigating for the first time, therefore, a case of concussion, presenting acute symptoms, no matter how apparently grave, the proper course would seem to be to suspect and search carefully for the presence of functional symptoms which may be grouped under the term hysteria, and to consider whether, if present, they may not give the true key to the patient's state. Such symptoms, in *acute cases*, would be widespread anæsthesia, not limited to the paralyzed limbs; the absence of atrophic changes or loss of electrical irritability in paralyzed muscles; persistence or distortion of the so-called tendon-reflexes; absence of disturbances of micturition, or retention of urine out of proportion to the other symptoms; exaggerated tenderness of the spinal region, and complaint of pain there excited by a trifling jar, or handling of the limb; a very late onset of the symptoms after the injury; a highly emotional mental state or, on the contrary, excessive apathy. A striking case, illustrating some of these points, was recently seen by me at the Massachusetts General Hospital in the service of Dr. John Homans, who kindly allows me to make use of it.

The patient was a young Irish girl, seventeen years of age, and only recently arrived in this country, who was brought to the Massachusetts General Hospital on June 25, 1882, having fallen down a flight of cellar stairs, striking upon her back and right hip.

On her arrival at the hospital she appeared to be paraplegic, both as regards sensation and motion. There was tenderness over the lumbar region; no dislocation or fracture; a slight bruise over right trochanter.

The patient was able to pass her urine. Her general condition was excited and hysterical.

Two days later she could move her feet a little, and on the third day could turn in bed, and the condition of the sensibility had somewhat improved, the tenderness over the spine continuing, however, without change.

I saw her for the first time at the request of Dr. Homans, about three weeks after the accident. She was then lying on her back, as she had been throughout, and while still, looked comfortable enough. She could draw up the legs, and in fact make every motion, although but feebly, but was very unwilling to be handled or moved, complaining of severe pain in the back. This was so severe that meningeal irritation was thought of, though the diagnosis of hysterical paralysis was finally made. The sensibility of the legs was impaired but by no means lost. The skin was dry and exfoliating.

A few days later the attempt was made to get her on her feet, although she cried out with pain. At first she could scarcely support her weight in the least, but in the course of two or three weeks she could hobble a short distance on crutches, the improvement being due largely to the perseverance of Dr. Howard Lombard, then assistant in the hospital.

On the 9th of August, nearly two months after the accident, she was attacked with what seemed to be acute gastric catarrh, vomiting all food. She was confined to bed, and suddenly, within a day or two, became absolutely paraplegic, and her lower extremities lost all sensibility to every kind of excitation.

¹ During the discussion which followed the reading of this paper before the Society for Medical Improvement, the criticism was made by Dr. Webber and others that Mr. Page attaches too much weight to the absence of post-mortem proof as indicating the rarity of organic disease of "concussion" or "contusion," and that it is not difficult to suggest other possible causes for the fact.

A day later the right arm became absolutely paralyzed and insensitive like the legs. She was seen by several physicians, and though the opinion that this, too, might be a hysterical manifestation was entertained, her condition was such as to excite the most serious anxiety.

For several days she lay like a log in the bed, unable to retain food or to pass her urine, both legs and the right arm extended and motionless, the muscles flabby and sodden, the skin absolutely insensitive, the expression of the face heavy and apathetic, scarcely any response to questions to be got out of her. At this time I went into the country for a few weeks, but learned from the assistant, then Mr. Holden, on my return, that after a few days the patient had become brighter, and the suspicion of hysteria becoming stronger, he had, by coaxing and urging, induced her to make a slight movement of the arm.

From this time improvement progressed steadily, and she was helping about the ward in a few weeks, and a few months later came to see me in the out-patient department, strong and rosy and completely restored to health except for the sensibility of the skin, which remained, and perhaps will always remain deficient.

Still more important, from the medico-legal point of view, is the fact that even in chronic cases where the patient presents no symptoms that might not more or less readily be feigned, it is sometimes possible by careful searching to discover signs of the so-called hysterical state, which, although not strictly objective, have almost the same value as if they were so as evidence against malingering.

So far as I know, this fact has not previously been noticed, certainly it has not found its way into the literature of the "railway spine." I have recently seen two striking instances of the kind, and I publish them for the sake of calling attention to the matter on the chance that such cases may prove to be commoner than might be supposed.

It is well known that typical chronic hysteria in women is apt to reveal itself by a loss of sensibility, either confined to one side of the body, or much more markedly developed there, and often involving in a peculiar manner the organs of special sense. Thus the field of vision is concentrically and often extremely narrowed, the color sense greatly impaired, the hearing diminished, and diminished especially for high tones, and much more for conduction through the bones of the head, as has only recently been shown by Dr. G. L. Walton, than for conduction through the air in the ordinary manner, and all this in patients who may be walking about, and are to outward appearance in blooming health. In men, on the other hand, as were my two patients, this condition of hemianæsthesia is very rare.

The first case¹ is that of a fireman, a large, powerful, and robust man, who, about six months before he presented himself at the Massachusetts General Hospital, was riding on the top of his engine, when it was over-set, and he was thrown violently to the ground. He was somewhat stunned, and severely bruised over his right side, and it was some weeks before he could do much with his right arm and leg, though they appear never to have been really paralyzed.

¹ This case has been reported at length by Dr. G. L. Walton in the *Archives of Medicine*, New York, for July, 1883, with interesting observations on the effect of the magnet. It is therefore given here only in brief outline.

When he presented himself at the out-patient department of the hospital all signs of outward injury had passed away. His gait was awkward and guarded on account of the painful stiffness of the right leg, and the movements of the arm were painfully restricted for the same reason. He complained of prostration, wakefulness, and impairment of memory, and was evidently inclined to emotional outbreaks. Besides these and similar symptoms the following signs were discovered by Dr. Walton and myself, and they seemed to us of special interest from the fact that the patient was unaware of them, and that he was making no legal claim for damages: The whole right side, and to some extent the left, was found to be anæsthetic, so that a pin could be thrust through a thick fold of the skin without exciting pain. This cutaneous anæsthesia involved the external meatus, and also the special senses of sight and hearing, the latter especially for bone-conduction.

The effect of a blow on the patella tendon was very peculiar. Instead of exciting simple extension of the leg at the knee the leg was either drawn in by a quick movement of flexion,² or there was a quick to and fro movement, and at the same time the right hand gave a quick jerk, and then continued to oscillate for several seconds.

The painful stiffness of the arm and leg was considered to be due to adhesions in or about the muscles covering the joint,³ and this diagnosis was borne out by the effects of treatment. Dr. Walton's subsequent investigations also established beyond a doubt the general diagnosis of hysteria.

The second case is that of a man of about fifty years of age who recently sued a railroad company for damages received under the following circumstances: He had been sent to do some work within a car house on a siding, of which the door, weighing three hundred or four hundred pounds, was off its hinges, and was kept in place by a strip of wood nailed across. The plaintiff, who claims to have been ignorant of the condition of the hinges, tore off the strip of wood, and tried to pry the door open, when it fell over on him and crushed him to the ground. He was seen within a day or two by a careful physician, who testified to the finding of severe bruises and extensive ecchymoses all over the right shoulder and side, and that the patient seemed to have been affected in his general condition by the accident.

At the time of the suit (two years later) the patient made the usual complaints of sleeplessness, loss of flesh, strength, and energy, and of great pain about the shoulder, occurring both spontaneously and on motion, in consequence of which he was obliged to carry the arm constantly in a sling, and in fact inspection showed just about the amount of wasting of the scapular muscles as might be expected to follow prolonged rest, but no loss of electrical irritability nor other sign of neuritis. There were also some spots of exaggerated tenderness to which I did not attach much importance. What seemed to me of by far the most significance was the discovery of well-marked analgesia of the entire right side, including leg and face, though nowhere so pronounced as in the region of the right arm and shoulder. Here a pin could be passed through

² For similar distortions of the reflexes in hysteria see Dr. Mitchell's *Nervous Diseases*, especially of Women.

³ Compare A Painful Form of Peri-Arthritis of the Shoulder, by James J. Putnam, M. D., *Boston Medical and Surgical Journal*, 1883.

a fold of skin from side to side without provoking the least sign of pain. This condition had never been referred to by the patient, and as far as is known he had never been aware of it. The sensibility was further tested by the use of a faradic wire brush with a strong current, which, as is known, is an excessively painful application, but even when this was used suddenly, without warning, over the sensitive skin of the scapular region the patient did not wince. The field of vision was not diminished in this case, and there was no impairment of the color sense nor of hearing.

In view of this hemianæsthesia, which I think the patient could not have feigned, together with the pretty clear indication that the arm had been carried in a sling not in the court room alone, for effect, but pretty continuously for a long time, I think the patient's statement of his general condition must be admitted to gain in credibility.

Of course it is not to be concluded that because a patient is shown to have hemianæsthesia he is therefore, practically speaking, a sick or disabled man. On the contrary this is a symptom of hysteria which often outlasts all the rest, and many women carry it through life even if in relatively good working health. What it does show, however, if occurring in a male patient, is that his nervous system has in all probability been subjected at some past time to some considerable perturbing influence, and its presence or absence might prove a welcome aid to diagnosis in other obscure cases as it did in this.

(1.) A CASE OF OSTEO-MALACIA WITH AUTOPSY. (2.) A CASE OF SUPPRESSION OF URINE, WITH AUTOPSY.¹

I.

I was called to Mrs. H. late in the evening of March 16, 1872, who had fallen and hurt herself; saw her within half an hour, and found that she had a fracture of the left thigh at lower third.

Her story was that while going from one room to another on her way to bed, as she stepped across the threshold she felt a snap and fell with the result spoken of.

The limb was treated with coaptation splints, extension by weight and pulley, and raising the foot of the bed.

She was a thin, spare, hard-working woman, with a marked dirty, sallow, earthy look, and although in comfortable circumstances had lived very frugally, — too sparingly, as far as I could learn. She was fifty-five years old, married, had had six children. Born in New York city. Her mother died at thirty-seven of consumption, her father at sixty-four.

On inquiry in regard to her general health, I found that she had been under the care of an irregular and very ignorant practitioner for some time, and treated for "rheumatism," and for six weeks before her fall had not been able to walk without crutches.

She bore her confinement to the bed well, had less "rheumatism," as she called it, in her thigh, and in six weeks had good union, extension taken off, and some attempts made to use the leg and flex the knee — much against her wishes. She complained a good deal of pain in thigh, and soon it was found that union had

given way and that there was decided shortening. Splints were reapplied and extension, but with less weight, so that after confinement for six or eight weeks more there was good union.

At the end of three months or more she could sit up, and with the assistance of her husband and children move about the rooms. She never, however, bore her weight on her left foot; always used crutches and had no motion of the knee.

She was in this state till September, six months after her fall, when I was again sent for and found great retraction of the leg, at least six inches shortening. She told me that for some time there had been severe pain in thigh, and she feared that possibly there might be, as a result, another fracture, which I found was the fact.

Again she went to bed, and for the first time I suspected the true state of things. She never left her bed after this.

The next prominent symptom was pain in the lower part of the bowels, and on examination a fibrous tumor, as large as the head of a child, was found in the right iliac region.

During the following winter the left leg became painful; soon there was found to be marked eversion and of course fracture of both bones of the leg just below the knee. The next year the right thigh and leg became similarly affected, though I cannot remember in which order it came on.

From this time the progress of the disease was more rapid; the right forearm at its middle, and then the right humerus, softened and gave way. The left arm never completely separated, though it was very much bent.

The ribs and sternum softened gradually, so that there was a good deal of dyspnoea from atmospheric pressure.

For nearly a year she was utterly helpless, could only move her head from side to side, and had a little motion to the fingers of her left hand.

She died nearly four years after the first appearance of the disease.

Pain, especially in the long bones, was a marked symptom before they softened and separated, and she always spoke of them as breaking when she felt these attacks coming on.

The phalanges of the fingers lengthened visibly before separating, and the third phalanx of left hand became longer than the second.

In the urine I never found any trace of earthy matter that is so often spoken of as being present. Its general appearance was normal.

Post mortem by Dr. E. G. Cutler, twelve hours after death.

No rigor mortis. Distortion of the legs and arms, shortening of the same, and of the hands, was marked. The bones of the head seemed to the external touch not softened. The clavicles were entire and of normal shape and size; in removing the sternum the knife easily cut through both near the junction with the sternum; they were seen to be composed of a thin layer of bony tissue inclosing a medullary substance of a dark red color, very like russia leather in tint. The sternum was very friable and could be cut with greatest ease in all directions with a knife. It was also hollowed out completely, and filled with the same kind of medullary tissue, which, however, in spots was of lighter color. The cartilages in the neighborhood of the sternum and

¹ Two Cases reported by Dr. L. R. Stone, to the Boston Society for Medical Observation, May 21, 1883.

ribs were also hollowed out to a certain extent, and the spaces thus left in like manner filled with the medullary substance.

The entire length of the body when straightened out on a board was forty-six inches from the crown to the soles of the feet (she was about medium height). The right arm from the acromion process to the tip of the ring finger, the longest finger in each hand, was fifteen inches long. The left arm from the acromion process to the tip of the ring finger was twenty-four inches long. The humerus, radius, and ulna of the right arm was scarcely to be recognized except at the shoulder, elbow, and wrist-joints, which were made out with tolerable clearness. The bones of the metacarpus were much shortened, as were also the phalanges. The humerus of the left arm was also scarcely recognizable to the touch, though the shoulder-joint and elbow were tolerably good. The fore-arm was completely flexed on the arm, and held by firm adhesions in this position. The radius scarcely perceptible except at the wrist-joint. The ulna softened, its normal length retained, and bent to a right angle nearly where it had rested on the chest. Both the extensor and flexor muscles could be felt on bending the fingers; they were, however, in the highest state of atrophy.

Right leg from the anterior superior spinous process of the ilium to the patella was twelve inches; from the same to the sole of foot eleven inches (twenty-three inches entire length).

Left leg from anterior superior spinous process of ilium to patella thirteen inches; thence to sole of foot twelve and one half inches (twenty-five and one half inches entire length).

The ribs on the right side were fractured in four distinct lines of fracture between the cartilages and just in front of the angles. On the left side there were five distinct lines of fracture. The diaphragm on the right side had the highest point of its arch under the third rib, on the left at the fourth intercostal space.

Nothing remarkable about the heart.

Hypostatic congestion in the posterior part of the lower lobes of both lungs. No calcareous deposits were found, though sections were made in all directions. The lungs contracted normally on section.

Liver hyperæmic, dark (not icteric), of normal size.

Spleen not remarkable.

Calcareous granules of very small size lying loose in the pelvis of each kidney. Under microscope seen to have an appearance not unlike starch granules or corpora amylacea, with a centre composed of cells. By treating same with a drop of very strong acid, microscopic bubbles of gas were evolved, and the granules disappeared, leaving only epithelial cells as a nucleus (carbonate of lime).

Intestines, stomach, and pancreas not remarkable.

Ovaries in usual condition of atrophy with cicatrices.

Fundus of the uterus occupied by a fibrous tumor, size of a child's head, which had undergone the serous infiltration. The tumor was interstitial, and projected from the very top. The cavity of the uterus was two inches in length, the cervix one and one half inch. It could not be determined if the os internum was impervious. The conjugate diameter of the pelvis was rather less than two and one half inches. Distance between the two anterior superior spinous processes was eight and one half inches. Sacrum was much curved. The pelvis was only narrowed antero-poste-

riorly as far as could be determined. The ischia were only slightly curved in. The promontory of the sacrum was hard to determine.

The vertebral column, the body being pulled straight, curved strongly towards the left, with the concavity on the right. The usual curve behind at the lumbar vertebrae was almost wholly effaced.

A section was made into the right thigh. The muscle was found reduced to mere lines of connective tissue directly underneath the skin, and immediately following was the remains of the femur, consisting of a thin plate, one half of a line in thickness, filled with a medullary substance which coarsely resembled in appearance a fresh blood-clot.

The microscopic examination of the medullary substance showed it to be composed of blood corpuscles and vessels, fat cells, and free fat granule corpuscles. Muscular tissue fatty infiltration; fat in the sarcolemma; many blood-vessels outside same.

The bone was seen to be deprived of the lime portion, and the Haversian system much enlarged.

She had false teeth.

II.

W. S. G., school-boy, aged seventeen years, six months, American parentage. Pale and delicate looking. I was called to see him on Wednesday, the 18th of October, 1882. He had not been well for a day or two, but on this day a slight eruption, with some swelling, appeared on face and forehead. Some heat and itching with it, but no fever, nor thirst, nor vomiting. The eruption had a slightly papular feel. As he had been tramping through the woods a few days before, shooting, I thought possibly he might have poisoned himself by ivy. Alkaline wash to face, with vaseline, light food, and in-doors was ordered, and the family to call me again if any new symptoms appeared, or he was not relieved in a few days.

He stayed in the house on Thursday, the 19th, but the next day, as the eruption had disappeared and he felt so well, he went to school for part of the day. He was considerably tired and stayed at home, about the house, however, and I was called to see him again Tuesday, October 24th.

I found him in bed, coughing slightly (he had been subject to asthma); temperature 103° F.; pulse 115; respiration 25. Vomiting occasionally. Slight diarrhoea. Urine high colored (I did not see it). Slept badly. No delirium. Felt weak. No nose bleed, no tinnitus aurium. No physical signs in chest.

Wednesday, October 25th. Temperature 102.02° F.; pulse 110; respiration 25. Vomiting continued, with slight diarrhoea. Slept rather better. Cough still troublesome, but nothing in lungs.

Thursday, October 26th. Less fever. Temperature 101° F.; pulse 100. Vomiting occasionally. Thirsty. Slept fairly well. Some, but less cough, with occasional rale at lower left back.

Friday, October 27th. About the same. Cough, and some pain in side. Vomiting occasionally; constant nausea. Pulse and temperature less than yesterday. Condition of lungs as day before. To-day urine was spoken of as peculiar — very dark, like blood.

Saturday, October 28th. Had a poor night. More pain in both sides, extending to back. Temperature 100° F., and pulse, as day before, 100. Vomited more. Uneasy and restless. Lies on back, with knees drawn up, though no tenderness at epigastrium or in either

hypochondrium. Bowels moved. Passed about three ounces of urine this morning, very dark, with blood in it. I saw him again in evening; had passed no urine. Milk and lime water, with also carbonic-acid water, ordered to relieve vomiting. Bromide of potassium, with chloral, to procure sleep.

Sunday, October 29th. Temperature 100° F.; pulse 90; respiration 24. Had a bad night. Vomited more frequently. Coughed more. Little more pain in sides. This morning found diminished resonance at base of left lung posteriorly, with increased voice and bronchial respiration, and bloody expectoration, which increased through the day, quite thin and very profuse. No appetite. Restless. No urine at all passed through the night nor this morning, though he made repeated attempts. No fullness over bladder. Diuretics ordered, and water freely.

Monday, October 30th. Temperature 99° F.; pulse 88; respiration 24. Physical signs not increased. Restless night. Vomiting persists. Has passed no urine; no desire to urinate. No pain. Expectoration very profuse.

Tuesday, October 31st. Same general report as of the day before. No urine; no desire to make water. No fullness over bladder.

Wednesday, November 1st. Temperature 98.5° F.; pulse 80; respiration 20. Vomiting more frequently and larger amounts. Coughs more; less expectoration. Has not passed urine now since Saturday morning, and no inclination to make water. By catheter I drew off about ten ounces, very high color, with some albumen. To-day a marked urinous odor to breath could be detected, but none to the skin or vomitus. Quite bright. Only complains of the vomiting. His voice somewhat hoarse or husky. Hands felt numb, very moist, and sticky.

Thursday, November 2d. Slept fairly well, though, in his words, he "felt all broke up." Temperature 98.5° F.; pulse 80; respiration 22. No urine; not a drop since catheterization day before.

To-day I tried sweating, but without any relief or success. Dr. Morrill Wyman saw him in consultation.

Friday, November 23d. Bad night. Coughed some. No fever, not much pain. Vomited more. Several loose discharges from enema of day before. Weaker. No urine; no desire to urinate; no indication of any in bladder. As the family did not feel satisfied with Dr. Wyman's grave prognosis, Dr. Francis Minot saw him with me to-day. He confirmed Dr. Wyman's prognosis. At his suggestion pilocarpine subcutaneously was tried, but its effect was not characteristic but quite depressing.

Saturday, November 4th. More feeble. Very restless. Less cough. Bad night. Vomiting less. No urine through day or night. No appetite. Urinous odor to breath still very marked. Skin clammy and sticky. No stupor. Mind very clear. No puffiness of face or hands. No anasarca.

Sunday, November 5th. Very restless. Pulse feeble; skin very cool; sinking rapidly. Passed no urine. No stupor, no disturbance of vision. Mind perfectly clear up to fifteen minutes of death. He said he felt as if he was going to have a discharge from his bowels, and started up and was held up by the nurse for an instant; had a large thin discharge, then was laid down, and died after a slight convulsion, in which he passed several ounces of urine.

Autopsy November 7, 1882, by Dr. W. W. Gannett, about forty-eight hours post mortem.

Body medium size, poorly developed, somewhat emaciated. Lividity of dependent portions. Rigor mortis present. Diaphragm, both sides, on level of upper border of sixth rib.

Pericardium contained a few cubic centimetres clear fluid. Pericardial surfaces not remarkable.

Heart of the usual size. Left ventricle contracted and empty. Right ventricle and auricle moderately distended with partly coagulated blood. Aortic valves sufficient; mitral admitted tips of three fingers; tricuspid, tips of four. The valves, cavities, and muscular substance showed nothing unusual.

The left pleural cavity contained 750 cubic centimetres (by estimate) cloudy fluid; both pleural surfaces had lost their glance, and were covered in many places with a thin, fibrinous false membrane.

The left lung partially retracted; upper lobe pale red; lower lobe dark red, non-crepitant, atelectatic. On section, surface of lower lobe not remarkable; of lower lobe showed a dark-red carnified surface, in which were several grayish, slightly granular nodules, varying in size from a dried pea to a cherry stone. On squeezing cut surface, numerous large and small drops of thick pus appeared.

The mucous membrane of the bronchi deeply reddened, injected, and covered with a layer of puriform fluid.

The pleural surfaces on the right side free from adhesion; the pleural cavity contained no fluid; the pleural surfaces showed nothing unusual.

The right lung everywhere crepitant, and showed on section nothing remarkable.

The spleen slightly enlarged, of the usual color and density. On section, trabeculae distinct; follicles indistinct; pulp slightly increased in amount, of usual firmness.

The kidneys enlarged about one half in size, of a dark reddish-blue color; usual density. Capsule readily detached, leaving a smooth surface beneath. On section, cortex about one half thicker than usual. The whole cut surface presents a dark-red color, both cortex and pyramids being affected, though the latter somewhat the darker. In the cortex the region of the straight tubules dark in color and indistinct; the region of convoluted tubules here and there distinct, with paler, more opaque streaks.

The glomeruli indistinct, except when surrounded by the opaque convoluted tubules.

The mucous membrane of the pelvis of the kidneys showed nothing remarkable.

The liver of the usual size, color, and density, showing on section nothing remarkable.

Bile ducts pervious. Aorta not unusual.

Microscopic examination of the kidneys, *fresh*, showed slightly granular condition of cells of convoluted tubules; many of cells of convoluted tubules contained also fat drops. Overflowing of the vessels with blood, with numerous hæmorrhages into the tubules.

Microscopic examination hardened kidney. Marked thickening of the capsules of glomeruli with cell proliferation of same. Glomeruli for most part showed increase of the nuclei and an apparent fusion of the loops; for most part the coils of the glomeruli contained but little blood, in some places, however, they were injected. Numerous hæmorrhages into the free space between the glomerulus and its capsule. Here and there round-cell infiltration of the intertubular connective tissue. The vessels of the kidney distended

with blood throughout, also numerous hæmorrhages into the convoluted tubules of the cortex and into the straight tubules of the pyramids. Numerous epithelial casts observed.

Diagnosis. Recent pleurisy with effusion. Acute broncho-pneumonia. Limited atelactasis of lung. Purulent bronchitis. Acute hyperplasia of spleen. Acute diffuse nephritis, hæmorrhagic variety, with capsular glomerulo-nephritis.

CLINICAL REPORT ON CASES OF LACERATED CERVIX, FROM PRIVATE PRACTICE.¹

BY JOSEPH H. WARREN, A. M., M. D.,

Physician to the Massachusetts Home for Intemperate Women.

A CASE OF UTERINE AND OVARIAN TUMOR. OVARIO-TOMY.

LATE in the autumn of 1880 I was called to see a refined and accomplished American lady, — Miss F., — a native and resident of Maine, twenty-seven years of age. Her history was as follows: About two years previous to this time she had fallen from a hammock to the ground, and soon began to complain of pains in the head and spine, especially in the lumbar region. There was great tenderness over the upper lumbar and lower dorsal vertebræ. Menstruation became very irregular and painful, being sometimes profuse and at other times scanty. She was troubled with leucorrhœa and constipation, except that during her monthly periods she often had a diarrhœa for a few days. Micturition was frequent, and was attended with more or less pain and smarting of the bladder. Her sleep was disturbed by erotic dreams and frequent emissions. It should be said that in early life she had acquired the habit of masturbation, but had abandoned it as soon as she became old enough to realize its baneful influences.

Her general appearance was good and actions sprightly. Ordinarily she was fond of company and conversation, but at times, and especially if alone, she would be low spirited, morose, and disposed to sigh and cry. These periods of depression increased in frequency and intensity as time went on, and as there was a history of insanity in the family it was feared that she too was losing her mental vigor. During this time she had been treated by her family physician for a uterine tumor with anteversion, and by a physician in Augusta for misplacement, retroversion with ante-flexion, and a tumor of the fundus of the uterus. She had also complained of flatulence and dyspepsia, although for a few months, by strict attention to diet, these symptoms had abated. She had no great thirst, and her only abnormal appetite had been for chalk and slate pencils in her school days. But she now complained of a choking sensation, and of pain in the left side over the slightly enlarged spleen, and of a pain over the left ovary which was constant, but aggravated so decidedly at her menstrual periods as to amount to an ovaritis. She had taken no exercise for some time either within doors or in the open air except now and then a short ride in a carriage, because walking induced more pain in the pelvic region and more frequent micturition.

On January 1, 1881, with the assistance of Dr. W. Everett Smith, of Framingham, I made an examination of the patient under ether. Through the abdom-

inal walls it was easy to feel distinctly the outlines of a uterus enlarged to the size of a four or five months' pregnancy. The os and cervical canal were so contracted that the smallest uterine probe was at first introduced with difficulty, but after some perseverance it was passed, and a larger one easily followed. The uterus was in a position of retroversion; the probe passed in about five inches and was easily moved around. By bimanual and rectal examination we found an absence of adhesions as well as of ovarian disease.

There had been, it will be remembered, no history of any excessive uterine hæmorrhage, and nothing to indicate a uterine fibroid except a gradual increase of size for about two years. But the last twelve months had been marked by a more perceptible increase, together with a greater amount of pain and suffering, so that at the time of examination the general appearance of the uterus was, to use a homely comparison, not unlike a large crook-necked squash with a very long neck. By passing the large uterine probe within the uterus the posterior wall could be felt of normal thickness by the finger in the rectum; while by pressing the hand upon the abdomen the anterior wall of the uterus seemed greatly thickened. No enlargement of either ovary could be detected. The abdomen at the umbilicus measured thirty-eight inches; but whether this increase was due to a fibroid tumor or to a simple hypertrophy of the uterus, I was not sure then and am not now.

The following day I examined the urine. The specific gravity was 1023, it later became 1026. There was an abundance of urates, earthy phosphates, and bladder epithelium, but no pus or blood corpuscles. There was no swelling of the feet or ankles. I prescribed for her sulphate of quinine four to five grains, with a half teaspoonful of compound licorice powder night and morning, and ten grains of bromide of sodium after dinner and supper. For the uterine tumor I began to use clay from New Jersey, similar to the kiud that Dr. Hewson mentioned in the Transactions of the American Medical Association for 1880. I mixed it into a soft mass with warm water and spread it on strips of muslin about 2.5 inches wide, with which I thoroughly covered the abdominal walls. These dressings were removed every five or eight days, when by molding a thin strip of sheet lead over the abdomen from the symphysis pubis to the ensiform cartilage the contour of the abdomen could be watched. At the same time the size of the abdomen could be determined by measuring the waist and abdomen at the umbilicus and crest of the ilium.

In May, when this treatment had been continued about four months, the patient measured twenty-two inches at the waist and twenty-six at the umbilicus; the probe could be passed into the uterus only the normal 2.5 inches; the flexion and elongated cervix had disappeared, and the uterus seemed soft and virgin like. The bladder trouble had all subsided, the patient had gained in weight; her buoyancy of spirits returning, she had been able for two months to take exercise in the open air without difficulty, and in this happy state returned to her home.

But this was far from being the end of this most interesting case, for soon after her return home she began again to complain. We, however, who had seen her in apparently such good health, were inclined to think that her new complaints arose from the discontent and loneliness she naturally felt after a winter in the

¹ Concluded from page 200.

city, and for some time could not believe that she was really so sick as her family represented her to be.

It seems by her account, when she presented herself again for treatment late in the fall of 1881, that at the time of her return home she thought she strained herself while riding in the cars, as she felt sore around the hips and could not walk without pain there. Also in about six weeks after her return she noticed that she began to enlarge over the right side of the abdomen, until in eight months she was as large as when she first came under treatment. She had the same old symptoms, — headache, backache, melancholy, dyspepsia, frequent micturition, and pain over left ovary, but menstruation nearly normal. Otherwise than this she seemed physically stronger than she had been in January.

On December 22d, with Drs. H. O. Marcy, Nelson, and C. E. Warren, we again etherized her, and found the uterus normal, but upon the right side we found an ovarian tumor of large size. The left ovary was also thought to be enlarged. We recommended the removal of the tumor, and the patient seemed very impatient for the operation.

Accordingly, after a tonic treatment to remove the dyspepsia, I performed the operation of ovariectomy on January 18, 1883, assisted by Drs. H. O. Marcy, Nelson, Bancroft, Smith, and C. E. Warren. Antiseptic precautions were taken. I made my incision about five inches long in the median line, and found the tumor to be multilocular and pretty free from adhesions. The largest cysts were filled with a very dark fluid, of the color and consistency of malt. I tapped them with Fitch's trocar. The smaller cysts were filled with a pearly white fluid resembling boiled starch. Since they extended high up in the abdomen, even to the ensiform cartilage, there was great danger of puncturing the stomach and intestines by the trocar, as Thomas points out in his treatise. I feel confident that with Wells' or Fitch's trocars I should have been in great danger both of puncturing the intestines and of tearing the thin walls of the cysts and allowing the fluid to escape into the abdominal cavity. But I had with me a small trocar, No. 36, of my own device, with a revolving point, and all present were highly pleased with its use. It passed readily into the cysts without jerking or jumping, and when in one cyst could be passed directly into an adjoining one with perfect safety and great ease.

The tumor and its contents weighed 13.5 pounds, a fair sized tumor for a girl whose entire weight was less than one hundred pounds. The pedicle was ligatured with carbolized animal ligatures obtained from the tendons of the moose, and kindly furnished me by Dr. Marcy; but before returning the stump into the cavity I stitched the end with fine carbolized catgut of Lister's preparation. Being careful that all blood and fluid were sponged from the abdominal opening, I brought the integument together with seven stitches and applied a thick dressing of thymolized cotton.

Her temperature immediately after the operation was 97.4° F., and pulse 60, but by nine o'clock in the evening the temperature was 100.4° F., and pulse 108. She complained of great abdominal pain in the right iliac fossa, for which small subcutaneous injections of morphia were repeatedly given. On the third day her menses returned and the temperature and pulse accordingly rose to 101.6° F. and 112 respectively. But they speedily subsided to the normal point, and so con-

tinued until the fourteenth day, when the patient became hysterical and almost unmanageable. By her violent motions she thus succeeded in superficially opening the abdominal incision from which on the twelfth day four stitches had been removed. I soon called in consultation Dr. C. P. Bancroft, Superintendent of the New Hampshire State Insane Asylum, and tried in succession the bromides, hyoscyamus, and morphine with only partial success. I then called Dr. Jelly, late Superintendent of the McLean Insane Asylum, and returned to the trial of hyoscyamus.

The patient gradually became more quiet in her manner, and seemed to justify our opinion that she would ultimately regain her mental condition. Menstruation returned at the proper time without any increase of temperature or disturbance of the system, so that in about six weeks after the operation it was thought best to take her to the Insane Asylum in Augusta, Me., near her home. She endured the journey well, but the asylum was full, and she was therefore attended at her home by Dr. Harlow, the Superintendent. She gradually recognized her surroundings, and for a brief space became mentally clear. All abdominal symptoms had disappeared, but in May, four months after her operation, she suddenly and unexpectedly died from pneumonia.

CHRONIC ABSCESS OF THE MAMMARY GLAND.¹

BY CHARLES E. GRANDALL, M. D., PORTLAND, ME.

History. Was called by Mrs. R., aged twenty-five, to see her in regard to an enlargement of her right breast. Found her to be a small woman, weighing about one hundred pounds, and of marked strumous diathesis. She had been married five years, but had never been pregnant. Her family history was given substantially as follows:—

A long time previous to the death of her father, he had what she described as a humor; said that it was confined mostly to his limbs, and was called "Syra-cuse humor." Her mother is still living, in fair health. Her sister, next younger, of light complexion, has rather delicate health, while a still younger sister is deaf and dumb, and in addition has slight curvature of the spine. Two of her mother's female cousins have died from cancer.

Was informed that the enlargement of the mammary gland, for which she sought advice, first appeared about seven weeks previous. The first that she noticed was a small sore spot in the median line of the right breast, about an inch and a half above the nipple. Gradually a small tumor seemed to form, which developed to about an inch or more in diameter, and was of rather dense consistence. This remained without perceptible change for a couple of weeks, and then seemed to soften, and, as it did so, her breast began to enlarge, until it was at least twice its natural size. After it attained this size, which was about five or six weeks from the initial stage, she did not observe much change, unless, perhaps, the breast became harder. During all this period there were no additional marked local symptoms, such as pain, throbbing, discoloration, or heat.

During the two weeks previous to her coming under observation, she had experienced what she described

¹ Report of a case read before the Portland Medical Club.

as a smarting sensation, having its location between the outside of the gland and the axillary space. There had been also a remarkable absence of acute constitutional symptoms, such as chills, fever, disturbances of circulation and nervous system.

There were evidences of impairment of general health, but doubtless due in a large degree to an extremely unhappy mental state. She and her friends had concluded that she was afflicted with cancer of the breast, and she had passed into the despondent mood so common among the victims of that wretched disease. Moreover, she had consulted some physician in her neighborhood, and he unreservedly pronounced the tumor to be cancerous in nature.

Remarks. From the history I concluded that my patient was afflicted with a chronic abscess of the mammary gland, and so expressed myself; but on examination found some symptoms that rendered a diagnosis difficult.

It was impossible to detect true fluctuation, but there was one point about the size of a dime which, under pressure, seemed to feel slightly softer than elsewhere. Moreover, the gland seemed too resisting to contain simply a cavity filled with pus, and there was a decided enlargement of the lymphatic glands of the axillary space. These symptoms, so suggestive of malignant disease, gave rise to some doubt in diagnosis, and therefore the patient was invited to accompany me to Dr. Gordon's office, to the end that his opinion might be obtained.

Doubt still lingering, we concluded to insert an exploring needle into the point before mentioned, which seemed to offer least resistance.

Upon doing so our exploration was rewarded by the tardy appearance of a thick, yellowish-colored pus. Soon after, a free incision was made, which was promptly followed by a copious discharge of pus and blood.

Chronic abscess of the mammary gland, so far as I can learn, is very uncommon. It is doubtless safe to say that one will see many cases of phlegmonous abscesses to one like the case under consideration. The predisposing cause is that mysterious condition vaguely termed "struma," or "scrofula." Patients thus afflicted belong to that class of whom Professor S. D. Gross says, "Nature has stamped with a peculiar diathesis, or state of the system, rendering them prone to phthisis, coxalgia, caries of the spine, and kindred maladies."

Of the exciting causes there are several, the chief of which are injuries, like blows, contusions, inflammations, and obstructions of the lactiferous ducts. In the case now referred to there was no remembrance or evidence of exciting cause.

The clinical history of a case has been briefly described as follows: "The disease usually begins in the form of several hard lumps, which, gradually coalescing, at length unite into one solid mass of irregular shape and of firm consistence, sometimes involving only a portion of the breast, and at other times the entire organ. Occasionally the glandular structure escapes completely, the morbid action being confined exclusively to the connective tissue around, behind, or in front of the breast. By and by a process of softening begins and, steadily progressing, a large accumulation of pus occurs, pressing upon the parts in all directions, and in time fluctuating distinctly under the finger.

"Marked enlargement of the subcutaneous veins usually attends, especially where the disease is of long

standing; but there is no discoloration of the skin, and seldom any severe pain; merely, perhaps, a sense of weight and uneasiness.

"The general health is not materially affected, and there is no involvement of the surrounding lymphatic glands."¹

As a point of clinical interest I wish to repeat that in this case the lymphatic glands of the axillary space on the right side were markedly enlarged, and it was that fact which caused especial perplexity in forming a diagnosis. Their enlargement was probably due to either pressure or irritation, for they began to decrease in two or three days after the abscess was evacuated, and ultimately resumed their normal size.

Besides the surgical treatment in this case, a systematic medical treatment was pursued for three months or more. It consisted of tonics, stimulants, best blood-making food, and plenty of out-door recreation. As a result, the discharge gradually ceased, the gland returned to its natural size and consistency, the wound closed, and the patient declared herself to be in better health than she had been for a long time.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

MEASUREMENTS OF BODIES OF VERTEBRÆ.²

DR. R. J. ANDERSON has published a series of measurements that may prove of practical use in medico-legal studies, and which are of a good deal of scientific interest. Some of the observations are deduced from the measurements of more than fifty spines. The author draws the following conclusions:—

"(1.) The anterior vertical diameters of the vertebræ, from the first dorsal to the third lumbar inclusive, are less than the posterior.

"(2.) The anterior vertical diameter of the fourth lumbar is equal to its posterior, and in the fifth is greater.

"(3.) The transverse diameters of the bodies increase from second cervical to second dorsal, then diminish to fifth dorsal, then increase to last lumbar.

"(4.) The antero-posterior diameters increase gradually from third cervical to third lumbar, and then diminish.

"(5.) The non-equivalence of the lateral parts of the bodies is generally observable from the seventh to the tenth dorsal, and may extend to the third and eleventh" (dorsal?) "vertebræ."

The height of the anterior surface of the vertebral bodies tallies very closely with the reporter's measurements in the identification of the human skeleton. Dr. Anderson is inclined to attribute the lateral asymmetry of the bodies in the dorsal region to the lateral curvature of the spine, but the peculiar flattening of the left side of the bodies seems to us to show conclusively that it is due to the pressure of the aorta. Unless we are mistaken this difference is usually to be seen in the fifth dorsal.

THE LINES ON THE ARTICULAR SURFACE OF THE LOWER END OF THE FEMUR.³

The lines in question are thus described in the last

¹ System of Surgery, Gross.

² Journal of Anatomy and Physiology, vol. xvii., part 3, April, 1883.

³ Prof. Jacob Heiberg, Archiv für Anatomie und Entwicklungsgeschichte. 1883.

edition of Quain's Anatomy: "One large articular surface coated continuously with cartilage extends over both condyles, but, opposite the front of the intercondylar fossa, it is divided by two irregular, slightly marked, transverse grooves into three parts, an elevated surface on each side for articulation with the tibia, and a grooved anterior surface for the patella." The generally accepted theory of the origin of these grooves is the one first proposed, we believe, by Henle, that they are made by the borders of the semilunar cartilages in the upright position. Professor Heiberg, of Christiania, has undertaken to refute this view. He points out that the external of these two lines very often is convex posteriorly, and, moreover, that the lines are better marked in young subjects than in old ones, both of which observations are inconsistent with the theory. He also performed the following experiment, which showed that the lines do not correspond with the semilunar cartilages: The knee-joint of a fresh leg was put in the extended position and the capsule very carefully opened just below the patella. The position of the transverse ligament connecting the semilunar cartilages was marked by a slight cut on the femur.

The tibia was then removed, the semilunar cartilages being left, and a plaster cast was taken of the lower end of the femur, which showed that the semilunar cartilages cross the lines in question and cannot possibly produce them. Professor Heiberg gives an excellent illustration of the position the cartilages occupy in relation to the femur. He then points out that these same lines are found in several orders of mammalia in which the knee is habitually more or less flexed, and in which it is impossible they should be the result of pressure through the tibia. He refers also to the well-known fact that in many of these animals the knee-joint consists of two or three more or less completely separated compartments, and suggests that these lines in man should be considered rudimentary organs representing the lines marking these partitions.

A NEW RULE OF EPIPHYSES OF LONG BONES.¹

This rule applies merely to the order of appearance of the centres of ossification in the epiphyses. For the long bones the well-known rule that the epiphysis towards which the nutrient artery runs is the last to appear and the first to unite is convenient for the individual bones (in spite of the exception the fibula presents), but of course it gives no clew to the relative dates of the appearance of ossification in different bones. Mr. Sutton thinks he has found that those epiphyses which are largest in proportion to the shafts of the bones they are to join are the first to show ossification. Thus the two earliest are the lower end of the femur and the upper end of the tibia. The lower end of the fibula by this rule precedes the upper. The femur is a good example. The lower end being much the largest epiphysis ossifies first, then the head, the great trochanter, and finally the lesser trochanter.

It seems that this rule does not admit of very accurate application in all cases, but we believe the idea is a new one, and it deserves more study, especially in comparative anatomy.

¹ Journal of Anatomy and Physiology, vol. xvii., part 4, July, 1883.

THE TRUE SIGNIFICANCE OF THE TRANSVERSE PROCESS OF THE LUMBAR VERTEBRÆ.²

Professor Holl has undertaken the study of the significance of the parts of the vertebræ by means of microscopic sections of young human embryos. Such a method is undoubtedly a good one, far superior to fanciful comparisons of adult specimens, but to be perfect the method should also include the study of the embryonic forms of lower animals. Holl's work, however, is very excellent. He shows the development from the side of the body of the vertebræ of what he call the *processus lateralis*, from which spring the laminae, and in which the rudiments of the transverse processes and ribs are contained. He shows that originally the cervical dorsal lumbar and sacral vertebræ have similar lateral processes. A glance at his plates shows how in the early stages the transverse foramina of the cervical vertebræ correspond to the space between the neck of the ribs and the vertebræ in the dorsal region. Holl shows that the transverse processes of the lumbar vertebræ contain the undeveloped rudiments of ribs.

THE EFFECT OF ROTATION ON THE TOPOGRAPHY OF THE NECK.³

We regret that we have not had an opportunity of seeing this interesting paper, which we know through an abstract in *Schmidt's Jahrbücher*. The change of the relations of important structures owing to the movements of the body is a very interesting question. Henke points out that in strong rotation of the head to the left, for instance, the right sterno-mastoid becomes almost vertical, the mastoid process being nearly above the sternum, and that if the head is then turned the other way this process almost reaches the posterior median line. Thus in rotation the upper end of each of these muscles sweeps through nearly half a circle, and one would naturally think that the deeper parts share in this motion with gradually decreasing freedom from above downwards. This, however, is not the case. The chief motion is of the atlas and cranium, and even in the soft parts there is a distinct line separating the parts that rotate with the head from those that remain at rest with the neck. This line passes just below the hyoid, which, with the cavity of the mouth and the epiglottis, follows the head, while the larynx remains at rest. We must say here, in parenthesis, that we cannot believe that Professor Henke means to deny *all* rotary motion of the cervical spine below the atlas, and if any occurs it is hard to conceive that the soft parts should not share it to at least some extent. Be this as it may, we do not doubt that there is, as Henke states, a sudden transition point between little or no movement below and much movement above. It is therefore evident that the relations of the sterno-mastoids to the larynx must vary considerably. According to Henke, when the head is turned to one side the anterior muscle may almost reach the median prominence of the thyroid cartilage, while the other leaves the side of the larynx quite uncovered. The common carotid with its continuation, the internal carotid, and the accompanying structures, take part in this movement. The side of the atlas that is brought forward carries these structures with it away from the

² Holl, Sitzungsberichte der Academie der Wissenschaften, Wien, Band lxxxv. 1882.

³ Festgabe zur Anatomie und Embryologie. Festgabe für Professor Henle. Bonn. 1882.

transverse processes of the cervical vertebræ. The loose connective tissue beneath the posterior border of the muscle fills the vacancy behind the vessels. They are no longer within the superior carotid triangle, being covered by the sterno-mastoid. On the opposite side the carotid is exposed, and its pulsation can be felt or even seen in thin persons.

The custom of celebrating the anniversaries of distinguished anatomists and physiologists by publishing a collection of monographs, while gratifying, no doubt, to all immediately concerned, is very inconvenient to the public, as these publications are necessarily expensive, and enjoy but a very limited circulation. This paper, from a testimonial to the great anatomist, Henle, is a case in point.

SEXUAL DIFFERENCES IN THE SURFACE OF THE BRAIN.¹

Very little notice has been taken of the influence of sex in the size and shape of the brain, and more especially the convolutions, in spite of the great attention the subject in general has received. We, for once, therefore, are glad to see the historical section near the beginning of the paper before us, which gives a brief account of what has been done. Nearly thirty years ago Huschke maintained that differences in the convolutions of the male and female brains could be detected. He stated that as a rule the fissure of Rolando was more nearly vertical in woman than in man, so that the distance of the top of the fissure from the posterior end of the brain was relatively greater in the former. Consequently in man the frontal lobes, and in woman the parietal, were relatively the larger, and the female brain was rounder. Recently Professor Rüdinger, of Munich (with whom Dr. Passet has been studying), has taken up this subject, and has turned his attention to foetal brains. He has stated that in most male foetal brains the frontal lobes are more massive, broader, and higher than in female ones; that the convolutions in the female foetus of seven or eight months are much simpler than in the male. He finds, also, that the fissure of Rolando is more oblique in the male than in the female, and consequently there is more cerebral matter in front of it in the former and behind it in the latter. Dr. Passet has devoted himself to the study of these questions, and has made careful measurements of thirty-seven brains (twenty male and seventeen female). His method seems very thorough, but we skip the details. His results in the main confirm Huschke's observations. The fissure of Rolando is more oblique in the male than in the female, and is also longer and more curved. It lies both absolutely and relatively further back in man; in other words there is more cerebral matter in front of it. The male brain is pretty clearly longer, broader, and higher than the female, and, as the same is of course true of the skull, it follows that the relations of the chief fissures to the sutures are not materially different in the sexes. Still, because the male brain is the larger, it follows that the fissure of Rolando is more distant from both the coronal and lambdoidal sutures than in the female. The parieto-occipital is usually in front of the lambdoidal suture in both sexes, but is likely to be more distant from it in the male.

We should not omit some mention of a simple and yet original method employed by Rüdinger, which is the comparison of the brains of twins of different sexes.

DECUSSATION OF NERVES IN THE LARYNX.²

It has been recently shown by Mandelstamm that the laryngeal nerves of the guinea-pig cross the median line, and Dr. Weinzwieg has been interested to ascertain whether any analogous arrangement is to be found in the human larynx. He has found two nerves running in the median line in the mucous membrane of the back of the larynx, one downwards from above, one upwards from below, and each giving off lateral branches. They are very small, the upper, which is the larger, being barely visible to the naked eye. They have been studied, magnified, the mucous membrane having been removed and made transparent by caustic potash. Hence it is not always easy to trace these nerves to larger trunks, but from some arrangements that have been observed it seems plausible to suppose that at least the upper one is, or may be, formed by the union of two lateral nerves. The microscope shows that the branches contain some fibres crossing from the other side. It should also be mentioned that anastomoses are sometimes found between the upper and the lower nerves. The author is inclined to trace the upper nerve to the superior laryngeal and the lower to the recurrent, and points out that there is now a disposition to relinquish the view that the latter is purely motor, and to believe that it sends minute ramifications to the mucous membrane.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

ALBERT N. BLODGETT, M. D., SECRETARY PRO TEM.

APRIL 4, 1883. Meeting called to order at 8.05 o'clock. DR. R. M. HODGES in the chair.

The first paper was upon the subject of

HÆMORRHAGE FOLLOWING TONSILLOTOMY,

by DR. J. W. OTIS. Before presenting the paper the reader made some general remarks concerning the regional anatomy of the pharynx and the nominal relations of the tonsil to the various blood-vessels and other important structures in its vicinity, and to illustrate the position of the parts, Dr. Otis exhibited four very beautiful anatomical preparations of that portion of the neck, in which the blood-vessels had been injected and the other organs stained with various colors so as to make them more distinct. The whole preparation was then carefully embedded in paraffine, which formed a firm and elastic white groundwork upon which the anatomical features of the specimens were sharply visible.

DR. HODGES, in introducing the reader, called attention to the care and skill with which the various structures about the pharynx had been prepared in the dissections, which he said related to an important region.

Upon the conclusion of his paper, DR. OTIS stated, in reply to a question, that his researches had led him to believe that whenever it is necessary to excise the tonsil, the tonsillotome should be the instrument employed. If this cannot be done, then the scissors or knife, or probe-pointed bistoury may be used. Several

¹ Passet, Archiv für Anthropologie, Band xiv. 1882.

² Weinzwieg, Sitzungsberichte der Academie der Wissenschaften, Wien., Band lxxxvi. 1882.

applications may be sometimes prescribed with advantage, but when the tonsil is very large no form of topical treatment is of any avail. If such remedies seem desirable, the best applications for astringent effect are glyceride of tannin, tincture of chloride of iron, and tincture of iodine. There is no call for internal medication, although iodide of potassium has been recommended and extensively employed in these cases. The form of tonsillotome most to be recommended is that of McKenzie, as it is firm and strong, and has no hooks, which may possibly draw the tonsil too far within the guillotine and do injury to other parts, or provoke hæmorrhage. The tonsil should not be excised in childhood unless urgent reasons exist for so doing, as these organs subside at the age of puberty and frequently never give any further trouble.

DR. H. OSGOOD said he had noticed this, and had thought of writing a book upon it. He mentioned the case of a lady whose tonsils were studded with fibrinous plugs, which were diligently removed by opening the tissue from one crypt of the tonsil to another; and he now treats similar cases in this manner. The depressions are then swabbed with cotton saturated with nitric acid or tincture of iodine and carbolic acid. In cases occurring since, he has always been able to notice a reduction in the size of the tonsil in three months.

DR. HARLOW stated that he had removed the tonsil in children with no bad results in two cases. The patients afterward became singers. Tincture of iodine was first faithfully employed locally, but did not reduce the size of the organ. He has also employed solutions of nitrate of silver, but now prefers chemically pure nitric acid, under which the tonsil generally becomes smaller. There is some danger from hæmorrhage in operating with the tonsillotome, as was observed in a case some years ago in which the tonsil was excised and an alarming loss of blood supervened, which was finally controlled after some hours by pressure from the outside and ice in the throat.

DR. F. H. HOOPER spoke of the distance of the tonsil from the carotid artery, and stated that Dr. Delavan, of New York, has shown that the edge of the tonsil is 1.5 centimetres from the wall of the internal carotid artery, and two centimetres from that of the external carotid. The tonsil is surrounded by a mass of connective tissue which protects the blood-vessels.

DR. S. W. LANGMAID remarked that the question of operation upon the tonsil always involved the existence of dense indurated tissue. In this condition the blood-vessels do not contract as is usually the case, but the bleeding ends are held open by the induration in their vicinity and an alarming hæmorrhage may more easily take place. This was the cause of the bleeding in Dr. Leffer's case.

DR. ELSBERG has operated upon the tonsil thousands of times and has never had serious accidents. Hardly another surgical procedure, except cutting corns, is more safe or more simple. In adults who are calm and fearless the bistoury may be used with perfect safety, but this cannot be so easily done in children, and the tonsillotome then becomes a blessing. With the Fabnestock instrument the tonsil is quickly and easily removed. In adults this instrument cannot be employed. The tonsil is so dense that the tonsillotome would not be strong enough to cut it. The amount of force employed in the operation is generally much too great. The tonsil should be supported by pressure

from the outside and a very slight amount of force is generally sufficient to excise the organ. The nearest blood-vessel is the ascending pharyngeal artery, but this cannot be wounded without cutting through the constrictor muscle. Of course in a patient with a hæmorrhagic diathesis, a so-called "bleeder," there might be an alarming or even fatal loss of blood, as would follow the extraction of a tooth.

DR. DEBLOIS remarked that a very useful procedure in case of a very large tonsil is the employment of a snare made from a steel wire, which will sever any tissue which a knife will cut. The pressure upon the tonsil upon the outside to support it during operation may introduce elements of danger, besides which, too much of the tonsil may be removed. The tonsil has a function in the human economy, and too much of its tissue should not be removed. There is no danger from the operation unless too much of the organ is included. With a small tonsil and a large guillotine, aided by pressure from the outside, large vessels may be wounded in the operation. In one case under his care there was serious hæmorrhage for an hour.

In answer to Dr. Cheever, DR. LANGMAID stated that by excision of the tonsil the voice is improved for singing.

DR. CHEEVER then stated that defective vocalization may be produced by excision of the uvula, and mentioned a case seen by himself in which the uvula had been removed by an operation, with the result of serious interference with the voice in singing. One cause of hæmorrhage of the tonsil which has not been touched upon is that which results from incising the tonsil in search of pus when the organ is the seat of abscess. This affection is not very common, but unfortunately it is very apt to recur frequently in an individual once affected with it, and it is always accompanied with much disturbance and great pain. The safest place to puncture the organ in search of pus is through the upper part of the soft palate. Often no pus is found, and when a spontaneous evacuation of pus follows it is frequently not through the incision made by the surgeon. Dr. Cheever always employs the tonsillotome in the removal of tonsils and has never used the bistoury, and has never experienced any serious accidents in the operation. He has strong faith in the abortive treatment of abscess of the tonsil by means of strong astringent applications to the organ. He prescribes tannin, myrrh, and the compound tincture of benzoin.

DR. LANGMAID stated that abscess of the tonsil is frequently only an abscess of the connective tissue about the tonsil, and that sometimes it will point in three days and sometimes requires ten or twelve. The distress is very great, and when it points it does so at a point very near the last molar tooth in the lower jaw, and often an incision at this point before pointing of the abscess will afford immediate relief from the pain.

In reply to Dr. Hooper, DR. CHEEVER stated that he did not know whether the locations of the so-called abscess of the tonsil were in the tonsil or in the connective tissue about it.

DR. LANGMAID remarked that abscesses often occur in the follicles of the tonsil, the so-called "follicular abscesses," and are subject to frequent recurrences and call for operative treatment.

DR. DEBLOIS spoke of the reproduction of the tonsil, and mentioned a case in which the tonsil was

excised six years ago, since which time Dr. DeBlois has also excised the same tonsil, yet at the present time the organ is so large as to require excision again. It is a common belief among patients that the tonsil grows again after excision.

DR. C. D. HOMANS said that he regarded tonsillotomy as one of the most beneficial operations in the entire domain of surgery. He has operated a great many times on children and has never had the slightest trouble or any indications of danger. In one family of eight children the tonsils were excised in seven of them, and every child became a singer. The hæmorrhage is always trivial, and never amounts to anything worth noticing. In the case of a patient who was a "bleeder" the hæmorrhage was protracted, but this could not properly be set down against the operation. The knife should never be employed, as some portion of the tonsil can always be reached and removed by the tonsillotome.

DR. LANGMAID mentioned that a certain professor in Philadelphia had called attention to a fancied relation between the tonsil and the testicle, and advised against the excision of the one on the ground that the function of the other might be destroyed and the virility of the patient would thus be obliterated, or if the subject be a child, this power might never be developed. The only experience upon which the statement seems to rest, is based upon one case in which a man who had had his tonsils cut never became a father, although married for many years. In consideration of the many causes operating to produce this effect in either sex, it is yet hardly appropriate to lay so serious a charge to a simple and insignificant operation in a remote part of the body.

DR. HODGES stated that no well-known case of serious hæmorrhage from tonsillotomy has occurred in Boston within twenty-five years. The operation was formerly performed much more frequently than now, probably three times as often as to-day, both in hospitals and in private practice. He said that he fully agreed with Dr. Homans as to the great benefit which often follows the operation in children, cases of anæmia and weakness in frail and pigeon-breasted children often improving in a most astonishing manner when nothing seemed to do any good before the tonsils were cut. Often such children became very rugged and strong. If the operation is not done in childhood there is frequently no occasion for it afterward, as the organs gradually subside at the age of eighteen or twenty years. As an example of the frequency of the operation, we have the experience of Dr. Elsberg, who states that he has removed the tonsil in eleven thousand cases, which is an astonishing announcement. This would amount to 444 operations every year, or more than one tonsil each and every day for *twenty-five years*. The best means for removing the tonsil is the guillotine tonsillotome, which does the work better and provokes less hæmorrhage than any other method known. The instrument works better if it is dull, as it probably crushes the tissues and thus prevents hæmorrhage by acting somewhat as an *écraseur*. The late Dr. Mason Warren had a large experience in this surgical procedure, and never used to have his tonsillotome sharpened. An instrument operated by *pushing* is far more useful than one in which the blade must be *pulled*. Dr. Hodges has no experience in the use of the bistoury, and should never employ it in this operation. A surgeon requires a *set* of tonsillotomes. The attempt

to use an ill-fitting or ill-adapted instrument is unsatisfactory to both surgeon and patient.

DR. M. H. RICHARDSON presented a paper upon

RUPTURE OF THE LIGAMENTUM PATELLÆ,

presenting a specimen which had been found in the dissecting room, and giving a summary of all known cases of this lesion. Dr. Richardson attached a great deal of importance to the lateral fibres from the borders of the patella and from the tendon of the quadriceps extensor, which spreading out over the lower part of the knee-joint in a fan-shaped manner were attached to the head of the tibia, and afforded great strength and prevented displacement of the patella to a greater distance than half an inch, even if the ligamentum patellæ were completely divided. An anatomical preparation of the knee-joint was then properly mounted so as to show the normal relations of the parts, and it was found that the rupture of the ligamentum patellæ must be accompanied by a laceration of these fibres from the sides of the patella forming a part of the capsular ligament, extending from the internal condyle entirely across the front of the knee to the external condyle, a rupture of at least seven centimetres in length, before the patella became sufficiently loosened to be drawn upward by the contraction of the muscles of the thigh.

DR. S. J. MIXTER saw a case of supposed rupture of the ligamentum patellæ, one year after the accident, when the patient suffered the same accident in the other limb while walking. The entire patella was drawn upward a distance of seven centimetres, and was discovered with great difficulty, as the patient was very fat. Above the tubercle of the tibia was a small fracture of the edge of the tibia or a portion of the patella. The patient was almost helpless, requiring a crutch and a cane in addition to a firm supporting bandage.

DR. CHEEVER has observed two cases of rupture of the patellar ligament. One case occurred in an old gentleman whom he found sitting on a chair unable to flex or extend the leg. The contour of the knee closely resembled the dissected anatomical specimens, looking as if the condyles of the femur were pushing through the skin into the world. The skin was very tight, and the entire shape of the end of the femur could be distinctly seen. The case recovered after some months with a comparatively useful limb. The second case was observed in a sailor who had suffered the injury at some former time, and was quite a surgical curiosity. The patient could swing the leg about so as to walk, and made no complaint. The patella was drawn far upward upon the thigh, and the condyles of the femur were completely exposed. The motion of the leg upon the thigh was something like that of a farmer's flail. Upon flexing the leg the condyles seemed to be coming directly through the skin. Dr. Cheever suggested that the strong lateral fibres which radiate to the sides of the knee-joint may have a great deal to do with the repair of fracture in the patella by keeping the parts in tolerable apposition. The rupture of the tendon above the patella is not a very rare accident. Dr. Cheever has had one case in an enormously fat woman, which was under treatment for some months. A large, fleshy callus was found above the patella, but even at this day the patient, though entirely well, requires the aid of a stiff supporting bandage in order to walk. The rupture of the ligament above the patella may be supposed to

heal more readily and perfectly than the rupture below.

DR. RICHARDSON mentioned the injury sustained by Dr. Bowditch as of this variety, and spoke of the entire recovery of the usefulness of the limb as supporting this suggestion.

DR. HODGES has seen two or three cases of rupture of the patellar ligament. In each case the laceration occurred close to the patella. He was struck by extensive division of the lateral ligaments, which was necessary before the patella could be drawn upward to any considerable distance from the lower fragment of the ligament. He thought this a singular and unexpected fact.

DR. A. T. CABOT recurred to the case alluded to by Dr. Richardson, in which after continued treatment by rest, bandage, and support, no repair had taken place. The depression was unchanged, and it seemed as if the infirmity were permanent. The skin over the seat of the ruptured ligament was then blistered. The first vesication was followed by an exudation which filled about half the depression occasioned by the rupture of the ligament. After the second blister the entire depression was completely filled up by a hard callus, which remained firm. After a time the stiff bandage was removed, and the patient has a very useful limb. On going up stairs the injured leg is dragged after the other, but in coming down stairs the patient puts one foot before the other in the usual manner. Dr. Cabot has also derived very beneficial results from the employment of blisters in the treatment of divided tendons in other parts of the body, especially those of the fingers. In the treatment of these injuries the use of vesicants seems to promise much more benefit than any other method now employed.

Adjourned at 10.05 o'clock.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

MAY 21, 1883. DR. INGALLS in the chair.

Dr. Ingalls reported a case of

DIVISION OF THE INTERNAL JUGULAR VEIN.

The patient, some two months before entering the hospital, noticed a swelling below the left ear, which increased until it filled the parotid region. He gave up work, but did not have much pain. May 3d, a soft spot near the lower margin of the tumor was opened and some thin fluid discharged; the health was good, appetite and strength fair. May 11th, an operation was performed for the extirpation of the tumor. In the course of the operation, having laid aside the scalpel and using the fingers to draw forward the lower part of the tumor, some dark blood was seen to well up suddenly from the lower part of the wound, and at the same moment the patient died. There was no noise or click heard, such as is mentioned in connection with such cases when air enters the vein. The autopsy, by Dr. Draper, showed the following conditions: Twenty-four hours after death, rigor mortis marked. On left side of neck was a recent surgical incision three and a half inches long over the anterior edge of the sterno-cleido-mastoid muscle and nearly parallel with it; also

a counter-cut two inches long, extending posteriorly from the middle of the principal wound; the edges of these incisions being opened, a tumor was disclosed occupying the upper cervical and left parotid regions; it was very soft and friable, and was much broken up (microscopic examination showed it to be a large celled sarcoma). This new growth was mostly separate from the surrounding tissues at its lower part; it had invaded these tissues in such a manner as to distort the normal anatomical relations of this region.

Internal examination: The primary incision along the front of the body failed to show anything noteworthy about the mouths of the divided vessels; neither blood nor bloody bubbles appeared. The pericardium was normal, its visible area not exceeding the usual dimensions; when the heart was exposed, it was plainly to be seen and felt that the right auricle contained mingled blood and air; numerous bubbles could be observed through the thin wall, and fine crepitation could be felt. A small incision in the anterior wall of the right ventricle set free, at first, some loose, dark coagula, followed upon slight pressure by a mass of spumous froth intimately mingled with blood-clot. The amount of air in the right auricle and ventricle was insufficient to distend those cavities beyond their normal volume. Free incision of the right ventricle found this cavity occupied by dark, ill-formed clots and masses of bloody froth, the latter especially marked among the depressions of the columnæ carneæ and in the tendinous attachments of the tricuspid valve. The left cavities of the heart were empty, the left ventricle being moderately contracted. The structure of the organ was healthy. An elastic catheter, which was passed into the superior vena cava and directed upward and to the right, emerged through the open mouth of the divided left internal jugular vein at the bottom of the surgical wound, just below the point of division of the left carotid artery. Both lungs were emphysematous. Their posterior and inferior parts were moderately injected; their upper and anterior portions were pale. The pulmonary arteries, to their smallest branches, contained air-bubbles. The abdominal organs were normal. None of the blood vessels were observed to contain air. The brain was rather paler and more moist than usual; otherwise it was normal.

DR. L. R. STONE reported a case of

OSTEO-MALACIA¹

with autopsy.

DR. WEBBER said that in cases of locomotor ataxia the bones often become changed, the earthy salts disappearing, and fractures occur very easily; erosion of the joints is also not uncommon. He regretted that no examination had been made of the spinal cord, as it might have thrown some light on the localization of a trophic centre for bone. In some cases Charcot has shown that probably such a centre exists in the gray matter of the anterior cornua. The difficulty which the patient experienced in walking, even before the first fracture, might be an additional reason for suspecting ataxia.

DR. MINOT thought it remarkable that while observation showed that the cells of the anterior cornua were the seat of the trophic nervous system, yet destruction of those cells is not always followed immediately by muscular atrophy. In infantile paralysis the

¹ Vide page 220 of this number of the JOURNAL.

wasting is apparently only the consequence of the paralysis, and not primitive. The loss of electric (faradaic) contractility is also immediate in that disease, whereas in progressive muscular atrophy (apparently from the same lesion) the reaction persists as long as any considerable number of muscular fibres remain.

DR. WEBBER said that a case has been lately reported where the skin of the body above the umbilicus, including the arms and hands, was covered with an eruption which left scars behind it. After death the corresponding part of the cord was found to be diseased. In infantile paralysis a large number of nerve cells are suddenly destroyed, and all muscles supplied from them degenerate *en masse*, but in progressive muscular atrophy one cell after another changes, but the electrical reaction remains for some time, and the muscular fibres degenerate slowly; so many healthy fibres remain that their reaction obscures the reaction of the few diseased fibres. In infantile paralysis we often have a change of nutrition in the bones which would suggest a trophic centre in the cord.

DR. JOHNSON mentioned the case of a patient who was brought to the Massachusetts General Hospital with a fracture of the femur in the lower third. A diagnosis of locomotor ataxia was also made. The bone healed with a very large callus, but in good position. The patient was discharged from the hospital wearing a stiff bandage, but on taking this off, and walking about, the leg was again fractured, simply from the weight of the patient. In this case there had also been some previous trouble with the stomach and bladder.

DR. WEBBER said that in a majority of the cases of locomotor ataxia with gastric crises there was also some joint or bone affection.

DR. L. R. STONE then reported a case of

SUPPRESSION OF URINE,

with autopsy.

DR. MINOT called attention to the absence of delirium and coma in this case, in which the patient had passed nearly a week without urinating. There must have been some elimination of urea through the skin and lungs (as shown by the odor of the breath), and from the stomach by vomiting, which prolonged life. In these cases the line of elimination must be by some other channel than the kidneys, as these are blocked. He had found the use of pilocarpine of great benefit, given in quarter-grain doses by the mouth, or, in emergencies, subcutaneously. He had also used the drug in cedema of the lung in cardiac disease, in puerperal cases, and scarlet fever, with small elimination of urine, and had found it very reliable in its action, and generally giving great relief to the patient. The continued use of the drug is depressing, and it should be always given with care. A case was mentioned where there were severe uræmic convulsions, which ceased after the administration of pilocarpine, but the drug was continued, and the patient died.

DR. WEBBER said that in one case treated at the hospital the pilocarpine acted only slightly, but as the patient's skin was dry and harsh he was rubbed with oil, after which the pilocarpine given again seemed to bring on more profuse sweating.

DR. BUCKINGHAM spoke of his failure to get good results from the fluid extract of jaborandi, and Drs. MINOT and WEBBER reported the same difficulty.

DR. REYNOLDS had seen good results from the use

of one fortieth to one twentieth of a grain of pilocarpine given to children of nine years, every two hours, without any bad effect.

Recent Literature.

The Microscope and its Revelations. By WILLIAM B. CARPENTER, C. B., M. D., LL. D., F. R. S., etc. Sixth edition. Two volumes. New York: William Wood and Company. 1883.

The English edition of 1881 of this well known work has been reprinted to form the two volumes, for April and May respectively, of Wood's Library of Standard Authors. The American republication is in appearance far inferior to the original. Not only is the print very fatiguing to the eyes, so closely are the lines crowded together, but also the illustrations have lost nearly all their merits, so coarsely are they reproduced. Apparently every possible economy in the manufacture was utilized in order to diminish the cost of the volumes. The consequence has been so great an inferiority in execution compared with the English edition, that every one whose means permit will certainly prefer the original.

Carpenter's *Microscope* is a work for amateurs, and has long been, and is likely to continue an invaluable assistance to all who employ the instrument for their recreation.

The field it covers is so vast that of no portion is a thorough treatment possible, unless all proportion of parts be sacrificed. This necessity renders the work less useful to the professional scientist, who naturally soon gets beyond what is to be found in Carpenter concerning his special subject. To the amateur no such objections occur, for he finds here descriptions of all the acknowledged favorites of microscopists — flies' feet, sponge spicules, amœbas, vegetable spores, diatoms, etc. These descriptions are clear, and well explain to the amateur the meaning of what he may observe.

It is true that the author does not exhibit a sufficient familiarity with recent scientific literature. In many instances he fails to record established knowledge, and therefore, when writing upon subjects beyond his own observation, he is not infrequently inaccurate, or adheres to views and interpretations now set aside. Thus he again presents Balbiani's unscientific and obsolete notions about the sexual reproduction of the infusoria; the chapter on the sponges is very defective, for no mention is made of the most important researches of all, those of F. E. Schulze, nor are his results noticed, although they are the basis of our knowledge; indeed, the chapter on sponges is so replete with errors that it is a serious blemish; the organ of hearing described in the antennæ of insects is known not to be auditory but olfactory in function. We will not pursue further this ungrateful enumeration of faults.

The long introduction, devoted to descriptions of the complicated English machines known as the grand stands and all the "accessories" thereto, and the optical principles of the microscope, takes up more space than commends itself to our judgment. The account of the homogeneous immersion objectives and the discussion of the angle of aperture will interest and enlighten many readers.

To conclude, this work, despite obvious defects, still remains the best authority for the amateur microscopist.

Medical and Surgical Journal.

THURSDAY, SEPTEMBER 6, 1883.

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MEDICAL MEN AND THE "CLASSICAL FETICH."

It is now two months since Mr. Charles Francis Adams, Jr., disturbed the dignified complacency of the Commencement season by a vigorous onslaught on the prevalent system of collegiate education. Our readers will remember the heavy arraignment he brought against the "fetich" of classicism as not only useless in a negative way as a preparation for the toil and sweat of this working-day world; but as positively injurious, on the one hand by taking the place of what might have been useful studies, or on the other by encouraging superficial and shiftless methods of thinking, inevitable from the imperfect way in which at the best the Greek language is now taught.

Immediately following this overt revolt against the supremacy of classical studies came a rattling fusillade from the small arms of the daily press, mostly, as was to be expected, on the side of the new departure. Later we have heard the heavier ordnance of the periodical magazines, notably the *Popular Science Monthly* and *Harper's Magazine* in their current issues. The attack of Mr. Adams is but a single movement in a conflict which has been long and severe, and will doubtless continue so long as there are boys (and girls) to be educated. But now that there is a temporary lull, while the smoke of the last engagement is rising, it is perhaps the duty of the medical journalist to step upon the field and see who is wounded.

To the physician it is certainly a question of vital importance, what form of mental training affords the best preparation for the study and practice of what has been called the gravest of the professions. Let us say at the outset that with the problem whether the traditional curriculum of academic training in most American colleges is the one on the whole better adapted than any other one system for affording the various professions the most useful common stock of mental nourishment, we have at present no concern, though it is in itself an important question. If doctors, lawyers, clergymen, artists must all have their early intellectual processes cast in the same mould, it is indeed a vital point that that mould be so formed as to distort and cramp the fewest minds possible. But, with the rapid extension of the elective system in our leading colleges, approximating that ideal condition in which each person may be given such individual train-

ing as is best adapted to his peculiar requirements, the question arises, What studies are best fitted to develop those qualities of mind essential to success in medicine? Or, as more directly suggested by Mr. Adams' oration, What, if any, is the value of classical training to the scientific man?

Experimental scientific pursuits are generally considered to imply a materialistic tendency of thought and belief. And yet it is to be said that Mr. Adams' point of view is more distinctively materialistic than any which the purely scientific man occupies. The railroad interest, in which Mr. Adams is engaged, might be taken as almost the type of materialism. In its broadest aspects it has to do only with the production of wealth, its highest studies are the future course of population and production, while its ordinary occupations are with questions of road-construction, transportation, and the management of machinery, both iron and human.

It need not be said that this is in no way to the discredit of the railroad business. It simply stands as the representative of nineteenth century money-getting. Now scientific research, especially such as is involved in the profession of medicine, is of a different nature. The student is constantly brought face to face with "ultimate facts," where reason and investigation are baffled. The origin of disease, the essential nature of pathological processes all lie beyond the reach of scalpel or lens. The practitioner in his daily duties is brought into contact with much besides purely material phenomena. He sees that psychical influences are often stronger than physical ones. He feels that his organs of sense cannot grasp the essence of life either at its inception or its dissolution. He is obliged to deal with the minds of patients as well as with the corporeal ills, and his mind needs to be as well furnished and trained as those he would influence. It may be said, then, that the training of the special senses, important as that is, is by no means all that the medical man requires. The inductive method necessitates close thinking, and that presupposes judicial qualities and a logical mind. To say nothing of the satisfaction which every one must feel in mental power, *per se*, and independently of his daily vocation, it is also true that the broader a man, the more of a doctor is he. On this point, Mr. Adams himself says:—

"And here let me once for all say that I am no believer in that narrow, scientific, and technological training which now and again we hear extolled. A practical, and too often a mere vulgar, money-making utility seems to be its natural outcome. On the contrary, the whole experience and observation of my life lead me to look with greater admiration, and an envy ever increasing, on the broadened culture which is the true end and aim of the university. On this point I cannot be too explicit, for I should be sorry indeed if anything I might say were construed into an argument against the most liberal education. There is a considerable period in every man's life when the best thing he can do is to let his mind soak and tan in the vats of literature. The atmosphere of a university is breathed into the student's system—it enters by the

very pores. I would not, therefore, narrow the basis; on the contrary, I would broaden it."

Some sort of a preliminary training, then, all will agree to be highly essential to one who is to undertake the study of medicine. Few things are more unsatisfactory than to see boys flocking to the large medical centres, when barely out from the common schools, unfit by their immaturity both of years and of mental growth for intelligent medical study.

"By their fruits ye shall know them," is an old maxim, and doubtless it is fair to apply it to this question of the results of classical training on the present generation of physicians. In looking back over the roll of names that have graced the medical profession in New England and the country at large for the last century, it is impossible to forget that the great majority were men who were educated in the old-fashioned college curriculum. Yet this only proves that such men were better fitted for their life work than those of their companions who had received no preliminary training. It reveals nothing as to what these same men would have accomplished if they had substituted French and German for Latin and Greek in their preparatory course. Undoubtedly there is truth in what Professor Youmans says, that "most men who have invested in classical education and find that they have been sold are anything but eager to acknowledge it," so that in looking back over his own intellectual history it is necessary for each one to guard against this danger of prejudice in favor of what he himself has. Few men in active practice, we apprehend, make any direct use of their classical attainments. An occasional help in the immediate understanding of some of the new terms that are multiplying in medical nomenclature is an advantage which is a poor substitute for facility at reading or speaking those languages in which so much of the professional progress of the present day is communicated. For the direct use of the physician Greek has little to claim. As a working tool it is infinitely less effective than German. Yet each must be his own judge as to how far his mental status has been improved by once having had that training. Dumb-bells and Indian clubs are less useful than shovels and picks, intrinsically, as tools for the performance of actual work, but sometimes their intelligent use makes a more perfect body, a frame more firmly knit, and capable of greater endurance than is that of the laborer. That German possesses any advantage over Greek for the purposes of an intellectual dumb-bell may well be doubted. As studied from a grammar, indeed, as studied under any circumstances except in the land where it is vernacular, it is not likely to be learned more thoroughly than any other exotic language, whether modern or classical. No American college student ever gains a thorough, that is, a speaking acquaintance with any foreign language. Its advantage over the Greek is certainly, then, not as a mental stimulant, but simply as a tool, and, considering the bondage to the lexicon of those who have studied it only in American colleges, not a very sharp tool at that.

It is interesting to see how highly classical studies have been prized by some of the most zealous devotees of science. James Mill, who had the most punctilious ideas of education, so that he allowed no one but himself to instruct his son, and presumably afforded just what he thought the most nutritious mental pabulum, included the classics as an important part of the son's training. And the illustrious John Stuart Mill himself testified in his old age to the value of his classical drill. Again, the great modern apostle of materialistic science, Professor Huxley, has sent his eldest son to Oxford, where the young man has just graduated with the highest honors which that university can bestow for classical learning.

Yet in spite of shining examples like these and others that might be cited, it can hardly be denied, we think, that classical study occupies a much less prominent place in the preliminary education of medical men than it formerly did.

The Faculty of the Harvard Medical School advise "undergraduates intending to study medicine to pay special attention to the study of natural history, chemistry, physics, and the French and German languages while in college."

The preliminary requirements for admission to the school are facility in the correct use of the English language, the ability to translate easy Latin prose, a knowledge of physics, and an acquaintance with one of the following subjects as the student may elect: French, German, the elements of algebra or of plane geometry, botany. The compulsory requirement of a moderate knowledge of Latin for those students who have not had a collegiate education is significant as showing the opinion of the Faculty regarding the advantage of that language. Indeed, few will deny that for its intrinsic uses, including the basis of nomenclature in every branch of science, as well as for its collateral benefit in forming a common foundation for the understanding of most modern languages, it is far more valuable than Greek.

The "experimental method," with the changes that it has introduced into the most advanced system of medical instruction, is undoubtedly working backward as an influence upon academic education.

In Dr. Whittier's paper on Recent Changes in Methods of Medical Instruction, read at the last session of the Massachusetts Medical Society, it was said incidentally that it was desired by some of the Medical Faculty, as soon as possible, to include descriptive anatomy and general chemistry among the subjects for preliminary study, so that the time of the medical course could be given more exclusively to laboratory and clinical work. Of course the tendency of this is to abridge the time given to classical study. Indeed, we think observation will bear out the statement that for the last decade few who intended making medicine their profession have devoted much more time to Greek than the minimum required by their college. It is to meet this desire on the part of its students that the elective system at Harvard has been established, and its constant and rapid growth in the direction of natural science and allied branches indicates

the strength of that desire. A glance through our medical catalogues shows the increasing number of degrees other than A. B. held by the students.

The Lawrence, Sheffield, Chandler, Massachusetts Technological, and other scientific schools undoubtedly attract from the academical departments of their respective universities a certain proportion of the young men contemplating medical study. The new Harvard Medical School building is a neighbor of the Massachusetts Institute of Technology, and the hospitable attitude shown our State Medical Society at its last annual meeting by that institution is an indication, if we mistake not, that its officers desire a closer relationship with the medical profession, and hope to make their valuable school a feeder to it. While, then, we are far from admitting the truth of Mr. Adams' sweeping criticism on classical studies as useless to a practical scientific man, we can but confess, with a certain regret, that they are losing the place which they formerly held as the only orthodox gateway to our profession. If the change is to justify itself it must be by imparting a new impetus to those experimental methods in which the future hope of medicine lies.

THE STUDY OF MEDICINE IN ITALY.

THE period of study necessary for the acquisition of a thorough medical education and the proper standard to impose for conferring a degree are subjects which have been so much discussed of late years, especially in our eastern cities, that the arrangements in vogue in these regards in other countries have an unusual interest. From this point of view we took pleasure in reading an account of medical instruction in Italy, by Prof. J. Bizzozero, of Turin,¹ and we may confess our pleasure was mingled with surprise.

We take it that if the majority of our English-speaking medical contemporaries ever associate the name of Italy at all with scientific or medical activity their minds revert to Galileo or to the palmy days of the University of Padua, when the studious and gentle youth of England, as of other northern countries, who were young with Bacon, and Shakespeare, and Harvey, made that long and expensive journey at far greater risk and outlay than allows us to safely reach Paris or Vienna to pursue those advanced studies or to obtain that finish which could not be followed or gained at home, or, it may be, merely in order to come back and say they had been there. By indulging these associations it is very possible that we do not exaggerate the respect due to the Padua and Bologna of two and three centuries ago, but by taking pains to inform ourselves we should certainly find that we had been neglecting to appreciate scientific and medical Italy of our own time.

The Italian universities are now governed by a law passed in the Kingdom of Sardinia in 1859, which, with some modifications, is now applied to the whole peninsula, and they are all under the control of the state. A student wishing to matriculate at one of the med-

ical schools must have a diploma either as bachelor of letters or of science, and, in addition, a knowledge of one of the modern languages, generally either French or German, and of drawing. He pays 40 francs to the state on matriculating, and a further sum of 660 francs during the different years of his course; at examination he pays 100 francs, and 60 francs for the diploma. In all 860 francs are paid by the student to the state before receiving a degree.

The courses of study cover six years, and are detailed under eighteen heads, namely: (1) general organic and inorganic chemistry; (2) botany; (3) zoology, comparative anatomy, and physiology; (4) experimental physics; (5) human normal anatomy; (6) human physiology; (7) general pathology; (8) pathological anatomy; (9) *materia medica* and experimental pharmacology; (10) special medical pathology; (11) special surgical pathology; (12) clinical medicine; (13) clinical surgery and operative medicine; (14) ophthalmology; (15) pathological and clinical dermatology; (16) obstetrics; (17) state medicine and public hygiene; (18) mental diseases. All of these courses are annual except pathological anatomy, to which two years are given, and human anatomy and the general clinical branches, each of which require three years.

In the University of Turin, one of the larger and more vigorous, these studies are divided as follows: first year, physics, botany, and zoology the first half, or four months; comparative anatomy and physiology the second half. Second year, chemistry (organic and inorganic), human anatomy, and human physiology. Third year, human anatomy completed, human physiology, general pathology. Fourth year, *materia medica* and experimental pharmacology, special medical pathology, special surgical pathology, clinical symptomatology, clinical surgery, pathological anatomy. Fifth year, pathological anatomy, operative medicine, topographical anatomy, hygiene, ophthalmology, clinical medicine. Sixth year, legal medicine, clinical medicine, operative clinical surgery, obstetrics and clinical obstetrics, dermatology and syphilology, theoretical and clinical, mental diseases, reviews of previous work.

In this schedule, which is not compulsory, the first three years are occupied especially by the purely scientific part of the studies, and the daily routine comprises few courses, whilst the last three years are devoted to the practical part of medicine.

In addition to the regular courses of instruction there are at the largest schools a very considerable number and variety of semi-official courses — *cours libres* — given by the extraordinary professors, and of private or extra-mural courses given by *privati docti*. Of these teachers the former receive a fixed salary, and the latter a certain sum for each student taking their course.

The official professors are of two grades, ordinary and extraordinary, the former having the advantage of receiving larger salaries and being permanent appointments, whilst the latter are appointed annually. The regular courses are given, as far as possible, by the ordinary professors, and their mode of appoint-

¹ Archives Italiennes de Biologie, May, 1883.

ment combines the advantages of the *concours* and a consideration of general fitness. The minister of public instruction may appoint directly, but this power is very rarely used. The usual procedure is for the minister, upon request of a school having a vacancy in its faculty, to name a jury or commission, only one member of which can be taken from the interested school, of from five to nine members, the majority of whom must be composed of ordinary professors teaching the same branch as that under consideration. This commission examines the titles of the applicants, their published works, positions held, courses given, etc., etc., and separates those who are eligible from the ineligible, placing the names of the former on a list in order of merit, the first being generally appointed by the minister. In case the claims of no applicant entitle him to be declared eligible the selection is made by *concours*, and the successful concurrent is appointed simply professor extraordinary. This system for the selection of professors is said to have given very good results in general in Italy, and to it particularly the scientific revival observable at the universities should be attributed.

The time of study — six years — required in Italy before taking a degree in medicine is two years longer than in Germany, and one year longer than in Austria or Russia, the same as that in Holland, and one year less than that in Sweden. In the Italian schools a large proportion of the time is devoted to the natural sciences and to anatomy, human and comparative.

There are twenty medical schools in Italy at the present time. Those of Bologna with 306 students, Naples 1389, Padua 278, Palermo 156, Pavia 316, Rome 219, and Turin 534, are official, complete, and of the first class; those of Cagliari 31, Catania 47, Genoa 201, Messina 38, Modena 95, Parma 100, Sassari 39, are complete and official, but are rated as of the second class; those of Pisa 147, Sienna and Florence 138, are official but incomplete, the two first giving only the first four courses, and the last only the last two courses; those of Perugia 31 students, Camerino 48, and Ferrara 11, are free and incomplete schools, — Perugia giving only the first four years, Camerino and Ferrara only the first two years.

The revival in medical studies in Italy has been brought about within the last twenty-five years, and has undoubtedly made very gratifying progress. Without allowing one's self to be deceived by prospectuses, with which sort of parade we are quite familiar, or supposing that mere length of residence is in itself an education, it is evident that medical education at the first class Italian universities is to-day both liberal and serious. And Professor Bizzozero makes it apparent that there is a spirit abroad which will not rest contented till even more is accomplished. More liberal government appropriations and more general hospital and laboratory facilities are still demanded and expected.

— J. B. Lippincott & Co. announce that the third volume of Agnew's Surgery, which brings this great work to a close, will be ready on September 1st.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THE American Public Health Association will hold its eleventh annual session at Detroit, Michigan, commencing Tuesday, November 13th, and ending Friday, November 16th.

The following subjects have been chosen for special consideration at the approaching meeting, as we learn from the Secretary of the Executive Committee:—

(1.) *Malaria*. Its ætiology and the methods for its prevention in localities or in persons; its American history; its specific particles; its origin; the conditions of its pervasion; its laws of extension, etc.

(2.) *Foods*. Their adulterations; healthy or deleterious modes of preservation and the function of legislation in regard to them. Ascertained facts as to adulterations in this country. Facts as to canned goods, condensed milk, artificial butter and cheese, prepared meats, etc.

(3.) *Vital Statistics*. Methods and results; defects apparent. How far foreign modes of tabulation are to be followed. Systems of collection and classification. Race vitality and the care of population as indicated by statistics.

(4.) *The Control and Removal of all Decomposable Material from Households*. The mechanical laws, constructions, and appliances relative thereto. The construction of all inside pipes and their connections, their traps and siphonage, flushing, ventilation. How they shall be connected with out-door receptacles and yet be free from ill effect.

The Executive Committee desires to avoid general dissertations on these subjects, and to secure facts and opinions as to practical methods of dealing with the interest of public health. Reasons for views entertained and results of experience as to preventive and restrictive measures are especially sought.

Papers of merit on other topics will not be rejected, but it is desired to concentrate attention, as far as possible, upon the above subjects. Methods and systems of physical education, drill, etc., suitable for the school-room, will also be discussed.

Reports are expected from special committees on compulsory vaccination, the management of epidemics, and on diseases of animals, and these committees will be glad to receive communications bearing on these subjects.

Gentlemen proposing to present papers are requested to notify the Secretary, giving titles of papers, and a statement of the time required for reading, with a synopsis of such papers *must* be in the hands of the Secretary by October 15th.

— Mr. W. F. Phillips, in the *British Medical Journal* for 14th July, recommends belladonna in the treatment of hay fever or summer catarrh, and records a case in which it proved very successful. He used the *Succus belladonnæ*, and gave at first one minim every hour, and afterwards one and one fourth minim every hour till relief was obtained.

MEDICAL NOTES.

— A member of the New England Divorce Reform League, Mr. S. R. Dyke, states that over six thousand women die yearly in the United States from attempts to destroy unborn children.

— Oil of wintergreen (salicylate of methyl) diluted with an equal quantity of olive oil or soap liniment, applied externally to the joints affected by acute rheumatism, gives prompt relief, and, from its pleasant odor, is very agreeable to use. — *The Quarterly Therapeutic Review.*

— "Physio-medicalism" is a sect which complains that it has received no representation in the Missouri Board of Health. If such bodies are to be organized on a sectarian basis, we fail to see why the physio-medicalists have not a good case. Their organ, published in Indianapolis, calls upon the faithful to organize, "to secure our rights, maintain our principles, protect ourselves, become a power in the land, and establish scientific medicine."

— Mr. Fitzpatrick gives in the *Lancet* his recent experiences in the treatment of hordeolum, or the common sty, during the time he was in Egypt. The plan of treatment adopted is to dispense with hot fomentations, etc., and to apply locally tincture of iodine to the lids, care being taken to keep them apart until dry. A few applications in the twenty-four hours is often sufficient to arrest the development of the sty.

— At the last annual meeting of the American Institute of Homœopathy, according to the report given in the *New England Medical Gazette*, a paper was read on the Solubility of Glass, in which the writer "showed that in the process of grinding a more or less appreciable quantity of the material of the mortar became detached and incorporated with the trituration." Another writer of "great scientific ability" declared that "there is absolutely not such a thing as perfectly pure sugar of milk to be obtained in the market, and consequently all triturations of medicine must contain more or less of admixtures, which might have an antidotal effect upon the remedy which it was desirable to administer. He found that sugar of milk contained in varying proportions *silica, calcaria, phosphorus, iron, and magnesia*, enough in many cases to equal the fifth or sixth decimal trituration." The practical conclusion of this paper was, "*we should also see to it that the impurities do not preponderate over the drug in the medicines which we administer.*"

— A correspondent of the *New York Medical Journal*, writing from Vienna, says: "One only needs to be here a few days in order to become convinced of the truth of the reports which he has received at home in regard to the growing rapacity (to use a term not too strong) of the average Vienna assistant. The tendency to shorten the courses and increase the fees offers an alarming prospect for the student of the future. Unless I am greatly mistaken in regard to the expressions of dissatisfaction which I hear universally from Americans who have been long studying here, the time is coming when the increasing clinical facilities of our own larger medical centres, and the

greater courtesy, not to say conscientiousness, of our instructors, will render foreign medical study less fashionable than it used to be. Certainly the opportunities for post-graduate work in New York are not to be despised even now in comparison with those of Vienna."

Correspondence.

SURGICAL APPLIANCES FOR DISABLED SOLDIERS AND SAILORS.

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE, {
WASHINGTON, D. C., August 28, 1883. }

MR. EDITOR, — Congress having appropriated a small sum for furnishing special surgical appliances to those disabled in the military or naval service, your coöperation is respectfully invited in order that this relief may reach the class of persons intended to be benefited.

This office is desirous of obtaining authentic information regarding all existing cases of severe and unusual injuries. Should you have occasion to report such, it will be found useful to bear in mind the following points:—

(1.) As no money commutation is authorized only such cases need be presented as offer a fair prospect of being relieved by surgical or mechanical appliances.

(2.) Artificial limbs and apparatus for disabled limbs being otherwise provided for by law, the injuries here in view are almost exclusively those affecting the head, face, or trunk.

(3.) As trusses are furnished under special legislation, hernia, when not complicated with other injuries, is not to be understood as covered by this appropriation for *special* appliances.

(4.) As the appropriation is small, it is proper that it be expended only on the most meritorious cases. It is therefore not intended to furnish appliances which are ordinarily within the means of the individual, nor those that are of a character so perishable that it would be difficult to keep up the supply. Regard is to be had chiefly to the severity of the injury and the ability of the sufferer, unassisted, to procure relief.

Very respectfully, your obedient servant,

C. H. CRANE,
Surgeon-General U. S. Army.

"THE IMMEDIATE AND FORCIBLE REMOVAL OF THE PLACENTA AFTER ABORTIONS."

MR. EDITOR, — My attention has just been directed to a letter from Dr. Paul F. Mundé, contained in your issue of the 16th inst., in which he charges me with a willful misinterpretation of the word "forcible" used by him in his paper advocating "the immediate and forcible removal of the placenta after abortions." This is an imputation under which I cannot rest without a demur. I quoted his language correctly, and if I have failed to comprehend its import, I prefer the fault to be considered one of the head rather than of the heart.

If I understand him rightly, he advocates as a rule of practice, "the immediate and forcible removal of the placenta after abortions." This is certainly plain enough as a general proposition, capable of but a sin-

gle interpretation, and one to which I object as being' in my humble opinion, unsound in theory and unsafe in practice.

The *quality* of force to be employed in the manipulation, he informs us, should be "*well directed and controlled, intelligent force*;" that when he said "*force should be absolutely avoided*," he meant "brutal, ill-applied force or violence," and he seeks to strike a parallel between the force proper to use upon these occasions and that employed in extracting the foetal head by the obstetric forceps. There can be no two opinions upon the character of the force that should be used if employed at all.

Now, as to the *extent* or *degree* of force to be exercised, if I were to determine it from what I conceive to be the spirit and the letter of the general proposition above referred to, I would say that it should be sufficient to accomplish the desired object, be that amount great or small. When Dr. Mundé says: "If the placenta can be removed without undue violence, either by means of the fingers or some instrument, it should be at once removed," I take it that if necessary, that force may even amount to *violence* if that violence be not "*undue*."

I may not understand the English language well enough to catch his full meaning; until I do, the "*forcible, instrumental, IMMEDIATE delivery of the placenta after abortions, without undue violence, as a rule of practice*," will appear to me an unsolved conundrum.

Yours truly,

H. V. SWERINGEN.

197 WEST WAYNE STREET, FORT WAYNE, IND., }
August 28, 1883.

Miscellany.

TRICUSPID REGURGITATION.

In a clinical lecture, Dr. John S. Lynch, of Baltimore (*Maryland Medical Journal*, August 18th), describes a case of this rather rare malady occurring in an unmarried female, aged thirty-three, who had been suffering from shortness of breath for three years. Rheumatism and syphilis were denied, but the latter presumably falsely so. Extreme ascites, with probably an ovarian tumor in addition, cyanosis, and marked venous pulsation were present. The physical signs were thus described and commented upon:—

"Upon inspection and palpation we find that the apex reaches far around to the left, quite beyond the mammary line; the impulse of the heart is seen and felt over a wide area, and the chest wall is visibly lifted at each pulsation. This indicates enlargement, and particularly enlargement of the right ventricle. For as the apex is included in the left ventricle, and the heart rests upon the diaphragm by its right ventricle, enlargement of this ventricle will have the effect of pushing the apex to the left and upwards,—precisely the condition we have here. The ventricle is then certainly enlarged; but whether this enlargement is due to pure hypertrophy or to hypertrophy with dilatation or to dilatation alone is not so easy to determine, by any objective physical signs. On the left side of the heart we can readily determine the fact by noting the characteristics of the pulse. If with an enlarged area of dullness, and a heaving, diffused impulse, we have a full, strong, and bounding pulse, then we know there is hypertrophy alone. But if with these the pulse is

small, feeble, and quick, and out of proportion to the apparently vigorous and active heart, then we know there is dilatation. In case of enlargement of the right ventricle, however, this sign is denied us. We cannot "feel the pulse" here. Can we, then, reach no conclusion in the matter? Is there no sign that will throw any light upon this question? Yes, we can inquire into the state of the pulmonary circulation, which will suffer the same alterations in right hypertrophy or dilatation that the systemic circulation does from alterations in the heart upon the left side. But here again we are met with another difficulty. Too much blood in the lung, or I should say too great blood pressure in the lung, gives rise to the same symptom that is present in too little blood in the lung. That is a subjective sensation of dyspnoea. The person feels that he cannot get "breath enough," and he will also suffer more or less in either case from a sensation of constriction in the chest. But there is this difference in the two conditions which in doubtful cases may be relied on to distinguish the one from the other. When there is too much blood in the lung the person will have, in addition to the subjective sensations I have described, a *cough*, which becomes more and more troublesome as the blood pressure increases, until finally stasis of the pulmonary circulation ensues with carbonic acid poisoning of the centres of sensation and consciousness, after which all cough ceases, because the person no longer feels or perceives the irritation which caused him to cough. When there is not enough blood in the lung this cough is not present; although the same result will be finally reached, namely, carbonic acid poisoning and coma, as in the other case. Here, then, we have a symptom by which we can arrive at a conclusion. If there is hypertrophy, pure and simple, of the right ventricle, the patient ought to have dyspnoea *with* a cough; if there is dilatation, and of course consequent weakening of the ventricular walls, there should be dyspnoea *without* cough. Upon inquiry she tells us she coughs only when she has a cold, and you will have noticed that she has not coughed once since she has been in the lecture-room."

The stethoscope revealed, continued the lecturer, "a faint, low-pitched, systolic murmur, whose point of greatest intensity is over the right edge of the sternum at the fourth intercostal space and over the fourth cartilage. It is so faint that it cannot be traced far in any direction from this point. But it cannot be heard at all over the apex of the heart, where we would hear a mitral murmur, nor over the mid-sternum at the third cartilage, where we would hear an aortic direct murmur, and hence cannot be produced by a lesion of either of these valves or orifices. The tricuspid regurgitant murmur is said to be generally accompanied by a mitral regurgitant one also, but in this case there does not seem to be any lesion of the mitral, or if there is, it is not accompanied by a murmur. You will remember, however, that absence of a murmur is not positive evidence of the non-existence of a valvular lesion, since the very lesion we are now discussing certainly exists sometimes—demonstrated by an unmistakable venous pulsation—without a corresponding murmur. Indeed, I have a lady now under observation for about ten years, who formerly had a strong mitral murmur which has now disappeared entirely, notwithstanding her heart trouble has become so bad that she has not been able to sleep for many months in the recumbent position, except when under the influ-

ence of morphia and digitalis. In the present case, while we have strong venous pulsation, apparent even from quite a distance, the murmur is very faint and low pitched. I beg leave to remind you, therefore, that the gravest valvular diseases are not always attended with the strongest murmurs. Nor do loud-pitched and hissing murmurs always indicate grave lesions."

THE TREATMENT AND CURABILITY OF CHRONIC UTERINE CATARRH.

At a meeting of the New York Academy of Medicine Dr. Paul F. Mundé read a paper on this subject, which is reported in the *American Journal of Obstetrics* for August. After alluding to the significance of the condition with reference to sterility, he says that in the nullipara it is often difficult to understand the reason for the sterility. In these cases the following condition of affairs was described: The narrow external os usually entails a retention of normal cervical discharge; this retention gradually produces dilatation of the cervical canal, and the accompanying retention causes hypersecretion until the cervix assumes a bulbous shape, and its cavity is filled with thick, viscid, discolored mucus. When the external os is dilated by the passage of the sound, and the cervix is compressed by the examining finger, mucus gushes out in a thick stream; the sound easily detects the presence of a large cavity within the narrow external os. This condition is not at all unfrequent, and is as unfailing a cause of sterility as it is curable by prompt and proper treatment.

Dr. Mundé then described briefly the plan of treatment which he had employed for several years, and which he had found to answer fairly well in the majority of his cases. He began by saying that it was utterly useless to expect to cure a chronic uterine catarrh by such mild remedies as the plain or even compound tincture of iodine, or solution of nitrate of silver, even one drachm to the ounce, or pure carbolic acid. You will certainly fail in chronic coporeal metritis, and in the cervical variety you will merely increase the discharge.

If the patient is a virgin or a nulliparous married woman it will generally be found necessary to enlarge the external os. This is essential for two reasons: first, to give vent to accumulated endocervical mucus; second, to allow the ready application of remedies. To accomplish the first, expose the cervix through Sims' speculum,—it can be imperfectly done through the ordinary cylindrical speculum,—and then with a Sims' uterine knife, or a simple bistoury or straight scissors, the anterior, posterior, and lateral lips are divided by incisions, about one fourth of an inch in depth, going completely through the mucous membrane, and making the os nearly or quite as large as the calibre of the cervical cavity. It is imperative to remove the four flaps of mucous membrane thus formed in order to prevent the speedy closure of the incisions. Seize each flap with a fine tenaculum, and trim it off with curved scissors, so as to leave a funnel-shaped external os. It is not necessary to perform this operation in every nullipara. The next step is to destroy as thoroughly as possible the cervical glands which furnish annoying mucous secretion. To do this effectively, once and for all, take a sharp curette with cutting edge (Sims' or Simon's), and scrape the whole

cervical canal up to the internal os until the creaking sound tells you that the sub-glandular base has been reached. Do not be afraid to do this thoroughly. When the whole of the canal feels smooth apply, on a cotton-wrapped applicator, or, better, a wooden or glass rod, pure nitric acid, being careful to protect the external surface of the cervix and also the vagina by packing cotton underneath. This application must be so thorough as to give the cervical canal a charred, yellow appearance, so that not even a drop of blood issues from it. In some instances he had applied the iodized phenol (equal parts) or saturated solution of chromic acid, but he preferred the nitric acid as more efficient and scarcely more painful. The operation should be performed at the residence of the patient, and the latter kept quietly in bed for a day or two at least. Three cases of cellulitis following this really trifling operation have induced him of late always to insist on this precaution.

While applications above the internal os are more liable to produce shock and peritonitis, those to the cervix are more frequently followed by inflammation of the pelvic cellular tissue. In spite of this danger the severe measure (sharp curetting and nitric acid) is by far the most advisable because it is the most effectual, and he had never as yet found it necessary to substitute the actual cautery so warmly recommended by Sims.

As for catarrh of the endometrium proper, he seldom used a sharp curette above the internal os except when it is for the purpose of removing vegetations or hypertrophied mucous membrane of unusual growth, or where the dull curette has not prevented a return of the disease.

An indispensable condition to the safe and complete application of caustics to the endometrium is the patulousness of the uterine canal, particularly of the internal os. Whether the application be made to the whole of the uterine canal or to the cervix alone it must be remembered that the more powerful the caustic the longer the time before the slough separates. That of nitric acid usually takes from five to seven days; iodized phenol or pure carbolic acid, three to four days; tincture of iodine, two days. Not until the slough has separated should a second application of a mild nature be made. It should be remembered, however, that so long as constant applications of caustic are made to a raw surface it cannot heal. Hence it is well, after a couple of weeks of steady treatment, to allow the patient a week's rest in order to give nature a chance to heal the wound. If she then fails we can begin again, and, perhaps, a third or a fourth time.

The cases he had found the most amenable to treatment and most favorable for a permanent cure were those in which the uterine catarrh is chiefly maintained by a narrow external os or internal os, or where a laceration of the cervix and a consequent hyperplasia of the follicles is present. The most obstinate are those cases of catarrhal endometritis and endocervicitis in which the external and internal orifices are anatomically normal, and no special hyperplasia of the os or mucous membrane can be detected. In these cases permanent relief seemed hopeless. The intelligent specialist and general practitioner need scarcely be told that accompanying anæmia must receive proper attention, and active hyperæmia of the sexual organs should be prevented by abstinence from sexual congress during the local treatment described.

TREATMENT OF WHOOPING-COUGH.

DR. ARCHAMBAULT (*Gaz. des Hôpit.*, No. 28, 1882, and *Progrès Méd.*, Nos. 48-52, 1882) recommends that children suffering from this disease should be kept indoors, and that special attention should be paid to keeping the temperature of the rooms they occupy uniform. He states that by means of such precautions

"it is almost certain that such lung complications as capillary bronchitis and broncho-pneumonia may be prevented." In support of his advice he points to the fact that summer attacks of the disease are always milder than those occurring in winter. The drug he recommends is sulphate of atropine, 1-1000, one drop thrice daily for children a year old, two drops for two-year old children, and so on.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 25, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	693	284	31.89	16.45	19.19	2.16	3.46
Philadelphia.....	846,984	398	199	28.61	14.26	13.55	4.02	6.78
Brooklyn.....	566,689	289	145	36.92	11.76	26.64	2.08	2.08
Chicago.....	503,304	253	171	43.45	3.56	25.28	5.14	5.14
Boston.....	362,535	222	96	31.98	17.12	26.13	1.80	2.20
St. Louis.....	350,522	181	88	36.50	6.08	13.83	3.32	4.98
Baltimore.....	332,190	184	92	32.94	12.96	15.66	2.16	3.24
Cincinnati.....	255,708	116	53	27.58	9.34	18.96	6.03	—
New Orleans.....	216,140	116	28	23.27	16.38	6.03	—	—
District of Columbia.....	177,638	106	59	32.90	10.34	22.56	3.76	.94
Pittsburg.....(1883)	175,000	53	25	37.80	3.78	20.79	5.67	3.78
Buffalo.....	155,137	110	61	49.09	3.64	34.54	1.82	—
Milwaukee.....	115,578	62	41	33.87	8.07	24.20	1.61	4.84
Providence.....(1883)	116,755	41	10	31.72	14.64	14.64	7.32	2.44
New Haven.....(1883)	73,000	30	18	20.00	3.33	20.00	—	—
Charleston.....	49,999	40	21	25.00	12.00	15.00	2.50	—
Nashville.....	43,461	34	11	37.44	8.32	16.64	20.80	—
Lowell.....	59,485	22	13	21.91	15.65	9.39	3.13	—
Worcester.....	58,295	35	23	48.62	17.16	34.32	11.44	2.86
Cambridge.....	52,740	31	13	32.25	38.76	22.61	3.23	3.23
Fall River.....	49,006	28	11	39.27	11.71	35.71	3.57	—
Lawrence.....	39,178	22	11	50.00	4.55	45.45	4.55	—
Lynn.....	38,284	14	5	50.00	7.14	35.70	—	—
Springfield.....	33,340	—	—	—	—	—	—	—
Salem.....	27,598	17	4	11.76	29.40	5.88	—	—
New Bedford.....	26,875	10	4	10.00	20.00	10.00	—	—
Somerville.....	24,985	13	5	46.14	—	38.45	—	—
Holyoke.....	21,851	10	8	60.00	10.00	50.00	—	—
Chelsea.....	21,785	9	5	44.44	22.22	33.33	—	11.11
Taunton.....	21,213	7	2	28.56	14.28	14.28	—	—
Gloucester.....	19,329	8	5	—	12.50	—	—	—
Haverhill.....	18,475	8	3	25.00	25.00	25.00	—	—
Newton.....	16,995	7	2	28.56	—	28.56	—	—
Brockton.....	13,608	7	2	28.56	—	14.28	—	—
Newburyport.....	13,537	9	2	11.11	—	11.11	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	8	3	25.00	12.50	—	—	25.00
Twenty Massachusetts towns.....	156,332	66	26	39.52	21.28	26.14	6.08	3.04

Deaths reported 3143 (no report from New Orleans): under five years of age, 1521: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 1168, diarrhoeal diseases 755, consumption 390, lung diseases 128, diphtheria and croup 106, typhoid fever 103, scarlet fever 66, malarial fevers 41, whooping-cough 34, measles 22, cerebro-spinal meningitis 20, puerperal fever 14, erysipelas four, small-pox three. From scarlet fever, New York 11, Chicago 10, Baltimore nine, Philadelphia eight, St. Louis seven, Brooklyn and Buffalo five each, Lowell three, District of Columbia two, Boston, Cincinnati, Pittsburg, Milwaukee, Cambridge, and Lawrence one each. From malarial fevers, St. Louis 14, New York 11, Brooklyn seven, Baltimore four, Buffalo two, Chicago, Charleston, and Salem one each. From whooping-cough, New York 11, Baltimore five, Chicago four, Philadelphia, Brooklyn, District of Columbia, and Pittsburg three each, St. Louis and Cincinnati one each. From measles, New York 11, Baltimore three, Philadelphia two, Brooklyn, Chicago, Boston, St. Louis, Cincinnati, and District of Columbia one each. From cerebro-spinal meningitis, Buffalo six, Chicago four, Philadelphia two, New York, St. Louis, Providence, Charleston, Lynn, Holyoke, Brockton,

and Peabody one each. From puerperal fever, New York three, Brooklyn and Boston two each, Philadelphia, Buffalo, Milwaukee, Providence, Charleston, Peabody, and Westfield one each. From erysipelas, New York, Baltimore, Providence, and Lynn one each. From small-pox, St. Louis two, Philadelphia one.

Six cases of small-pox were reported in St. Louis; diphtheria 23, typhoid fever 21, scarlet fever 14, and measles one in Boston; scarlet fever 12, and diphtheria two in Milwaukee.

In 37 cities and towns of Massachusetts, with an estimated population of 1,108,343 (estimated population of the State 1,922,530), the total death-rate for the week was 25.57 against 25.72 and 26.53 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending August 11th the death-rate was 18.4. Deaths reported 3039: diarrhoea 254, acute diseases of the respiratory organs (London) 177, measles 108, scarlet fever 106, whooping-cough 50, fever 46, diphtheria 29, small-pox (London, Birmingham, Leeds, and Newcastle two each) eight. The death-rates ranged from 11 in Halifax to 26.2 in Liverpool; Bradford 14; Bristol 15; London 17.3; Leeds 17.5; Nottingham 18.1; Birmingham 18.2; Brigh-

ton 18.8; Leicester 19.3; Sunderland 21.1; Newcastle-on-Tyne, 22.7; Sheffield 23.1; Manchester 23.8. In Edinburgh 15.5; Glasgow 24.8; Dublin 20.9.

For the week ending August 4th, in 167 German cities and towns, with an estimated population of 8,553,274, the death-rate was 26.7. Deaths reported 4397; under five years of age, 2562; diarrhoeal diseases 436, consumption 498, lung diseases 272, diphtheria and croup 129, measles and r6theln 70, scarlet fever 59, typhoid fever 59, whooping-cough 58, puerperal fever 11, small-pox (Ratibor one) one, typhus fever (Glauchau one) one. The death-rates ranged from 40.3 in Munich to 11 in Gladbach; K6nigsberg 27.3; Breslau 34.4; Dresden 27; Berlin

32.8; Leipzig 24.7; Hamburg 25.8; Cologne 26.2; Frankfort a. M. 18.1; Metz 16.4.

For the week ending August 11th, in the Swiss towns, there were 26 deaths from diarrhoeal diseases, consumption 18, lung diseases nine, typhoid fever eight, whooping-cough five, measles two, scarlet fever two, diphtheria and croup two, erysipelas one. The death-rates were at Geneva 11.3, Zurich 19.3, Basle 20.6; Berne 33.9.

The meteorological record for the week ending August 25th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Mins.	Amount in inches.
August, 1883.																			
Sun., 19	29.913	75	86	67	79	53	84	72	SW	SW	W	7	12	7	C	C	C	—	—
Mon., 20	29.857	77	90	64	78	55	76	70	W	S	SW	5	16	10	C	F	C	—	—
Tues., 21	29.891	79	86	73	74	34	55	54	W	W	W	8	12	6	F	F	C	—	—
Wed., 22	30.014	75	90	64	61	46	64	57	W	SE	W	8	8	12	C	C	C	—	—
Thurs., 23	29.908	77	92	70	66	43	84	64	SW	SW	SW	11	18	7	C	C	R	—	—
Fri., 24	29.920	72	82	68	71	29	59	53	W	NW	NW	5	11	6	O	O	C	—	—
Sat., 25	29.968	64	76	57	60	68	73	67	NW	SE	W	11	7	6	C	F	C	—	—
Means, the week.	29.924	74	92	57				62										4.10	.07

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING SEPTEMBER 1, 1883.

T. C. WALTON, surgeon, detached from the Powhatan, and ordered to the Naval Academy.

SIMON, W. J., surgeon, detached from the U. S. S. Constellation, and, after completing temporary duty as member of a board at Annapolis, Md., to be placed on waiting orders.

McCLURG, W. A., passed assistant surgeon, detached from the U. S. S. Dale and ordered to the Naval Academy.

DIEHL, OLIVER, assistant surgeon, detached from the U. S. S. Constellation and ordered to the Naval Academy.

JONES, M. D., passed assistant surgeon, ordered to temporary duty at the Naval Hospital, Washington, D. C.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held on the second Thursday of September, at the Medical Library Rooms, at four o'clock P. M. S. N. Nelson, M. D., of Cambridge, will read a paper upon The Uses of the Obstetric Forceps. Lunch served at close of session.

HENRY M. FIELD, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Training Schools for Nurses. With Notes on Twenty-Two Schools. By W. G. Thompson, M. D. New York: G. P. Putnam's Sons. 1883.

Hysterical Convulsions and Hemi-Anæsthesia in an Adult Male. Cure by Metallo-Therapy (Gold) By E. B. C. Seguin, M. D. (Reprint.) 1883.

Fifteenth Annual Report of the President of the Inebriates' Home, Fort Hamilton, N. Y., for the Year 1882. Brooklyn. 1883.

A Contribution to the Study of Neglected Lacerations of the Cervix Uteri and Perinæum. By Thomas A. Ashby, M. D., Professor of Obstetrics, Woman's Medical College of Baltimore, etc. Read before the Clinical Society of Maryland, May 4, 1883.

A Case of Pulsating Exophthalmus. Ligation of the Left Common Carotid. Death. By David Coggin, M. D. Salem, Mass. (Reprint.)

Second Annual Report of the State Board of Health of the State of New Hampshire for the Fiscal Year ending April 30, 1882.

The Essentials of Pathology. By D. Tod Gilliam, M. D., Professor of Pathology, Starling Medical College, etc. Philadelphia: P. Blakiston, Son & Co. 1883.

Report on Diseases of Women, from the First Congressional District. By R. J. Nunn, M. D. Savannah, Ga. (Reprint.) 1883.

Fourth Annual Announcement of the College of Physicians and Surgeons, Boston. Session of 1883-1884.

The Management of Abortion. By Walter Coles, M. D. (Reprint.)

McGill University, Montreal. Fifty-Seventh Annual Announcement of the Faculty of Medicine. Session of 1883-1884. Montreal. 1883.

Sanitary and Statistical Report of the Surgeon-General of the Navy for the Year 1881. Washington. 1883.

Medical Society of the State of Tennessee. Transactions. 1883. Fiftieth Annual Meeting.

Report for the Year 1882-1883 of H. A. Newton, Director to the Board of Managers of the Observatory in Yale College. Presented by them to the President and Fellows, etc.

On Shock. By William H. Meyers, M. D. Fort Wayne. (Reprint.) 1883.

Practical Histology and Pathology. By Heneage Gibbes, M. D., Lecturer on Physiology and Histology in the Medical School of Westminster Hospital, etc. Second edition. Philadelphia: Presley Blakiston, Son & Co. 1883.

The Book of Prescriptions, containing upwards of Three Thousand Prescriptions collected from the Practice of the most eminent Physicians and Surgeons, English and Foreign, etc. By Henry Beasley. Sixth edition. Philadelphia: P. Blakiston, Son & Co. 1883.

Outline Diagrams of the Ear, for the Pictorial Record of Diseases of this Organ and its Connections. For the Use of Practitioners, Students, and Clinical Assistants. Cincinnati: A. E. Wilde & Co.

A Memorial Sketch of William Heberden Mussey, M. D. By Edward Mussey Hartwell. Reprinted from the Annals of the Society of the Army of the Cumberland for 1882.

A Tracheotomy Tube for Gradual Withdrawal, and Report of a Case in which it was Used. By H. F. Hendrix, M. D., of St. Louis. (Reprint.) 1883.

A Report on the Laceration of the Cervix Uteri. By T. B. Harvey, M. D. Stenographically reported for the Indiana State Medical Society at Indianapolis, May, 1883.

The New York Post-Graduate Medical School. Announcement of the Second Year. Sessions of 1883-1884.

Original Articles

THE SCHOOL OF VETERINARY MEDICINE OF HARVARD UNIVERSITY.

BY C. F. WITHINGTON, M. D.

DURING the present month this new department of the university opens its doors for the first time to students. The successful inception of an undertaking of this importance simultaneously with the inauguration of the new and commodious building devoted to the uses of the Medical School, is indicative of the strong support which institutions of sound learning can rely upon in their endeavors to furnish the most advanced and thorough instruction in any branch of knowledge. A full description of the new Medical School building has been published in this Journal, and it is thought that it may be of interest to men who are engaged in a profession which has so much in common with veterinary science, to hear what is to be done in that allied department. The present development of veterinary medicine by men of culture and long training in the principles and practice of their art, is perhaps only one phase of the general advance in scientific methods which late years have witnessed, but it is certainly among the most striking, by reason of the contrast which it presents to the low state of the profession as represented in the average "horse-doctor" of the previous generation. There can be no doubt that the intelligent diagnosis and skillful treatment of disease in animals which can give no aid by subjective symptoms, furnishes a broad field to ability of the very highest order.

An ordinary English education, such as is gained in the common schools, is for the present all that is required in the way of preliminary education from candidates for this school, though it is recommended that candidates present themselves for an examination equivalent to that required of medical matriculants. The course of study extends over three full years, with examinations annually on certain specified subjects—arranged in a logical gradation. On looking over these subjects one sees that they are almost identical with those of the corresponding years respectively at the Medical School. For instance, the first year is devoted to anatomy, physiology, general chemistry, and botany, the latter subject being a requirement as yet in advance of the Medical School. The studies of the second year are practical anatomy, medical chemistry, materia medica, pathological anatomy, surgical pathology, clinical medicine, and clinical surgery; and of the third year, therapeutics, obstetrics, theory and practice of veterinary medicine, clinical medicine, veterinary surgery, clinical surgery, ophthalmology, parasites and parasitic diseases.

The school proper is located at the Bussey Farm in West Roxbury, where the most of the didactic lectures, recitations, and laboratory work will be conducted. The laboratory practice covers dissection, chemistry, histology, and botanical analysis, all under the supervision of competent instructors. Many of the professors are the same men who teach analogous subjects in the Medical School, as for instance the instructors in physiology, pathology, therapeutics, chemistry, and embryology. The more distinctively veterinary portion of the instruction is for the present entirely in the hands of Dr. Charles F. Lyman, F. R. C. V. S., who holds the

chair of veterinary medicine, and of Dr. Harrison, V. S., who lectures on comparative anatomy.

The custom of employing medical men to give the instruction on general medical subjects is one which obtains in most veterinary schools, and the advantages of this method would seem evident, despite the fact that it has been made the subject of adverse criticism in some quarters. Chemistry is chemistry, for whatever purpose it is learned, and the better the instruction offered the more to the benefit of the student. After a year or two, when the classes have reached the higher grades of the course, other veterinarians will be added to the corps of instructors as may be found necessary.

For the clinical portion of the instruction the school depends chiefly upon the new veterinary hospital which has been recently completed in this city, and which is without doubt the largest and most perfectly appointed institution of its kind in any English-speaking country, if not in the world. It should be understood that the hospital is not a part of the school, having the same relation to it that the general hospitals of Boston do to the Medical School. By an arrangement between the two institutions the surgeons are able to make the opportunities afforded by the hospital available for the instruction of the students. To the courtesy of Dr. Lyman and his assistant, Dr. Harrison, the writer is indebted for being kindly shown the resources of the hospital and for many of the facts which he is able to present in this article.

The structure, situated on Village Street in this city, opposite the stables of the Adams Express Company, is of brick, containing three stories above the basement. At the front are two doors, one for the admission of patients, and the other for the use of attendants and visitors. At the left as one enters are the offices of the surgeon and the assistant surgeon, one of whom is always in the building; sleeping accommodations are provided for the latter in the upper story. Hence animals brought for treatment are always sure of immediate attention, day and night. Passing the offices, one comes at once into a large open floor, laid smoothly in asphalt, so that by the use of hose it can be kept perfectly clean. Above the middle of this floor is a shaft leading directly to a sky-light in the roof, so that this area forms a well-lighted operating room, and the opening into the shaft from the story above becomes a gallery whence students can conveniently watch an operation. On this floor a bed is laid whenever an operation of any severity is to be performed, the animal is thrown down upon it, and the anæsthetic administered. For the larger animals ether or chloroform is sometimes used, but for dogs the latter anæsthetic is not employed on account of the cardiac irritability which is almost the rule among the canine race. In many cases where perfect surgical anæsthesia is not required chloral is administered in doses of an ounce to an ounce and a half, according to the size of the horse. This produces a considerable degree of muscular relaxation, and the animal, though not absolutely unconscious, suffers little pain. Of a number of operative cases which I saw, two were of fibroma, one situated on the back and one on the lip; both were considered to be of traumatic origin—the latter caused by an irritating bit. From another horse a scirrhus of the spermatic cord had been removed. The occupant of the adjoining stall was suffering from a long fistula in the neck. It began some two years ago from an abscess which

was opened by the animal's owner, a physician. A fistula remained, into which a rubber catheter had been introduced. Some four months ago this catheter disappeared in the tract and could not be found. On removal at the hospital it was discovered bent upon itself and extending well down by the side of the spine. Being found it was readily removed. Hospital records are made of all cases, with the diagnosis. During the term these records will be kept by the students, and will contain the history, results of physical examinations, and treatment, as in the human hospitals.

On this floor are seven ordinary and four box stalls, one of which, of double size, is padded on the floor and sides, for the reception of any violent or maniacal patient, colic being the principal cause, apart from brain disease, for such violence as to require the padded cell. These accommodations are now being doubled by the occupation of the corresponding space in the second story with stalls. In one corner of this ward stood a valuable Guernsey cow, which was being treated for a leucorrhœa that had existed since her aborting a month ago. Parturition among the lower animals, it may be observed, is by no means the uniformly physiological process which some persons believe to be the rule among all animals except "women of the upper classes." In the cow, for instance, the normal presentation is of the head resting between the fore-feet, but all sorts of malpositions are of great frequency. The number of possible presentations is much greater than that in the human female, is, in fact, almost unlimited, so that obstetrical assistance is often called for. In deformed pelvis, and in the condition known as torsion of the uterus, that viscus cannot empty itself, and the Cæsarean section is the only resource. In many other cases embryotomy is called for. Puerperal fever, puerperal apoplexy, and metritis, all presumably of septic origin, are common, and exceedingly fatal. Fortunately the abnormalities in the mare are less frequent than in the cow, but the smaller animals, probably by reason of their multiple births, are subject to difficulties in their labors. Regarding the frequency of uterine disease, not much seems to be known, partly because of the lack of subjective symptoms to call attention in that direction, and partly because the history of the sexual function is difficult to obtain. Cases of uterine malpositions and of "ulceration of the womb," however, have been observed. The cow alluded to was being treated by astringent and antiseptic injections. The hand was introduced as a guide to the nozzle of the syringe and the solution, chiefly of permanganate of potash, was brought into contact with the whole vaginal canal.

Passing up stairs one comes to the *nurses'* (that is, the grooms') quarters, and thence to the ward devoted to sick dogs. Of these only two were in the hospital at the time of my visit, one suffering from eczema of the back, the other from mange. Skin diseases, chiefly of a parasitic nature, are a frequent occurrence among dogs, and the surgeon in charge remarked upon the difficulty of treating them satisfactorily because of the presence of hair, which prevents the medicament from being brought in contact with the disease, and because the patients, not being amenable to reason, persisted in scratching themselves. In lamenting the unreasonableness of the brute creation in this regard compared with the human species, the surgeon did not appear to be conscious of any irony.

The dogs' kennels are of an average size, of perhaps

four by six feet, the partitions between them being three or four feet high. Arrangement is made for an elevator to bring up the horses to the stalls now being prepared on this floor. A tan-covered incline is also provided as an additional means of escape in case of fire. On this second floor is the pharmacy, a neat, well-appointed room, containing the common drugs, mostly in powdered form. Regarding dosimetry, it was formerly considered that the dose of any medicine for a horse was about ten times that for a man, but the tendency of practice now is to somewhat smaller doses. Some curious facts of toleration were mentioned, for instance, three grains of strychnia have no special effect upon the horse, and the ordinary dose of powdered nux vomica is two drachms, whereas one sixtieth of a grain of strychnia is considered an unsafe dose for a dog. Horses and cows are very tolerant of opium, a drachm of morphia, for instance, being often given to a cow. The favorite method of administration of medicine for large animals is by boluses, which, when containing the bulkier drugs, resemble in appearance a roll of coin. While the tongue is grasped with the left hand, the bolus, carried in the fingers of the right, is pushed back over the tongue into the pharynx. Quinia in drachm doses is thus very readily administered. Another method of giving medicine is by electuary, the viscid excipient being gummed on to the teeth, and allowed to dissolve. Occasionally the "drench" is employed, the liquid being poured into the cheek of the animal while the head is raised. Milk and eggs are used as vehicles for alcoholic stimulants. Horses are sometimes found which in a pneumonia or other acute disease will take milk punch with avidity, lapping it from the pail, while in health they cannot be induced to touch it. Sometimes dogs can be made to take medicine wrapped in a bit of meat, but, as the doctor remarked, one can generally give but one dose in that way to the same dog.

In one corner of this room is a case of surgical instruments. Among these were to be seen, of course, many familiar in human surgery, with others whose use required explanation. Some of the tooth forceps, for instance, are identical with those used by dentists, but with them was a molar forceps of great length of handle, fastening upon the tooth by a screw, and altogether a formidable-looking instrument,—indeed, the extraction of a horse's molar is no very easy operation. The sight of a clamp used for securing the cord in castration suggested the remark by the surgeon that the ligature was uncertain in such cases both on account of the vascular character of the parts in old breeding stallions, and also because of its great liability to set up tetanus. The operation of castration is not so common in the hospital as might be supposed, except in specially valuable animals, being commonly done by the semi-professional gelders, who are to be found in every village, and who go about "cutting." Two sizes of delivery forceps used in bitches and sows were noticed, in size and shape not unlike the placenta or ovum forceps used on the human subject. The male catheters, of flexible rubber, and much curved, were somewhat over a yard long, while a female catheter of metal was shaped exactly like that for the human subject, but, of course, on a much larger scale. Stomach-pumps, enema tubes, etc., presented the same herculean proportions. Of tracheotomy tubes one pattern was exactly like that in common use among our surgeons, but, of course, of a calibre of an inch or so.

Another style, considered preferable, was a self-retaining tube in two parts, the one first introduced turning downward, and the other being passed in at the external orifice of the first, and thence by a fenestra in its upper side directed upward into the portion of the trachea above the opening. The fact that the incision for this operation is made a foot below the larynx in the horse allows plenty of room for such an instrument to be accommodated, and its facility of removal and yet self-retaining power make it a useful instrument. New growths and abscesses involving the laryngo-tracheal region are among the commoner diseases calling for this operation. In this connection it may be mentioned that among the commoner surgical operations practiced in the hospital are "firing" for diseases of the joints and ligaments. In some cases a platinum point heated is driven into the diseased structure. Of carcinomatous tumors, scirrhus, which is common in the spermatic cord, melanoma, found about the anus, and cancerous cauliflower growths, occurring anywhere, are often met. Of these all but the first spread by metastasis or contiguity, and the most thorough removals often grant merely enough respite to enable the horse to be sold by his owner. Fibromata and other benign growths are met with. Fractures are often insusceptible of treatment, especially if of the lower limb and quite oblique. If nearly transverse a starch bandage is applied, and the horse slung, at least partially, so as to keep the weight off the injured foot as far as possible. Some fractures, on the other hand, do well without much treatment. The pelvic bones, for instance, often unite readily under an application of some partially stiff material in the form of a coating over the flank, not sufficiently firm to secure entire immobility. Fractures in dogs are usually easily treated with splints or stiff bandages.

The third floor contains the hay and grain loft and a carriage room, besides the apartments of the assistant surgeon. The basement has space for the accommodation of cows, and also the blacksmith's shop. An observation of the frequent cases of lameness due to careless shoeing will at once convince any one of the important place which the forge-room occupies in the treatment of horses. If ill-fitting shoes and improper paring of the hoof cause deformities, an intelligent application of mechanical principles is the rational method of cure, and its direction belongs as truly to the function of the veterinary surgeon as does the construction of orthopædic apparatus to the surgery of deformities in the human subject. One horse which had been the victim of too much blacksmithing I saw being treated by vesicants with a view to stimulating the growth of the hoof so as to reproduce the deficient structure.

The hospital, which cost about \$20,000, has been erected largely by private contributions, and it is desired to make it self-supporting as soon as possible. To this end a scale of prices has been adopted which should conduce to a liberal patronage of the institution on the part of the stock-owning public. The charge for board, treatment, and medicine for sick horses is two dollars per day, while surgical cases are received at half this price. Dogs are boarded and treated for fifty cents per day, and out-patients are charged for at one dollar per visit. Considering the perfection of the arrangements for light, ventilation, and drainage, the steam-heating, and the general adaptation of means to the end desired, these prices are very reasonable.

Animals sick with more chronic diseases, or suffering from lamenesses or illnesses which require long seasons of rest, are, on the recommendation of the surgeon, sent to the Bussey Farm Hospital, where they can receive all proper care and treatment, together with the benefit of grass paddocks in summer, and a warm straw yard in winter, and where the rates charged are much less than at the Village Street hospital, horses, for example, being treated and boarded for \$4.50 per week. An additional inducement offered to owners of numerous animals is the following: Each subscriber of ten dollars a year may (1) have admitted to the hospitals for medical or surgical treatment an unlimited number of animals, his own property, at a charge for keep and medicines only (not exceeding one dollar a day). (2.) He may procure without charge the opinion of the surgeons of the school as to the treatment of any animal which he may desire to retain in his own possession, whenever an opinion can be given without examining the animal away from the establishment. (3.) He may have ten horses examined as to soundness in the course of the year, and procure the opinion of one of the surgeons thereon, either verbally or in writing, free of charge. Under this contract patients will not be visited, and horses will not be examined for soundness away from the establishment. The facilities thus afforded by this hospital, in addition to a clinic to be held two afternoons in the week, in which treatment is offered for any animals that may be brought free of all charge except the actual cost of the medicines furnished, are likely to secure abundant material for the clinical instruction of the students by a system identical with that employed in the Medical School. Students will be furnished with cases for personal examination, and will be called upon to report them before the class, where the reports will be criticized. A regular course of supplementary instruction will be given in auscultation and percussion, which will afford students an abundant opportunity for acquiring a thoroughly practical knowledge of these methods of exploration. In this connection it may also be mentioned that courses are promised on bandaging, the application of surgical apparatus, and operative surgery. In obstetrics students will be instructed in the methods of performing necessary operations, and will have opportunities during their third year to take charge of cases, while in connection with a course of lectures to be delivered upon the diseases of the eye in the domestic animals, practical instruction will be given in the use of the ophthalmoscope.

It is designed by the officers of this institution to make it the best school of its kind in the country. The course of study which has already been outlined is more extended than that required in any other veterinary school using the English language. Even in the Royal College of Veterinary Surgeons of England, which has been the recognized head of the profession among English-speaking peoples, the course is only three years of eight months each, in all three months less of study than will be required at the Harvard School. The French and German schools, which are under government supervision and subsidy, have a four years' course of study. The excellence of the English school is such that American students of the higher grades are hardly dependent on the Continent for study. To such as do go there, however, France offers fully as much inducement as Germany, Lyons being, perhaps, in as great a degree as any city the veterinary

centre of Europe. At all events the French literature of the profession is considered more valuable than the German.

Turning to this side of the water, we find that there are a number of veterinary schools of more or less excellence, but most of them wanting in practical, if not in ostensible, adherence to a strict matriculatory examination, and none of them approaching the Harvard standard as to the length of study requisite for the degree. Among those schools most strenuous in insisting upon preliminary fitness for the study, and basing the examination, as does the Harvard School, on the requirements of the Royal College, is that connected with McGill University in Montreal, and under the special direction of Professor McEachran. It is now in its seventeenth year, and has about fifty students. It is subsidized by the government, and has a hospital. Its course of instruction covers three years, but each "year" of study comprises only six months, so that its requirement represents actually nine months less of work than that of the Harvard School.

In New York city is the Columbia Veterinary College (not in any way connected with Columbia College), having a curriculum covering only two "years" of five months each; also the American Veterinary College, a department of the University of the State of New York. This school has an equally short course of study, but requires the equivalent of a common school education of its students, and its teaching is said to be good. Its hospital has been one of the most flourishing in the country, accommodating about eighteen horses and five dogs, a smaller capacity, however, as will be seen, than that of the hospital in this city. Among other similar institutions of less importance may be mentioned one at Toronto, and one just inaugurated at Minneapolis.

The Harvard School opens with a number of students in excess of the expectations of its most sanguine friends, and in view of the high standard which it has set before itself there is every reason to predict for it a successful and useful career. Veterinary medicine cannot be learned in six months, and the institutions which insist on prolonged and faithful work will be sure of public respect and patronage.

A NEW DEMONSTRATION OF THE CAVITIES OF THE MOUTH, NOSE, AND PHARYNX.¹

BY THOMAS DWIGHT, M. D.

THE object of this paper is not to chronicle any new anatomical fact, but to make public a method which, I believe, may be called a new one, of demonstrating the cavities of the mouth, nose, and pharynx, more especially the last. I need not pause to point out the importance to the practicing physician or surgeon of the knowledge of the shape, size, and relations of the pharynx, but I may say that, unless I am greatly mistaken, comparatively few possess it. This is due chiefly to the intrinsic difficulty of the subject and to defective methods of instruction. The views obtained by dissection are correct only as to certain points and very delusive as to others. Frozen sections give new and very instructive views, as may be seen by those in the works of Braune, Rüdinger, and Henke, but they

are open to the objection that many sections, and sometimes sections cut in various directions, are necessary to give a correct idea of an organ or space of considerable size, and that the amount of study needed to understand them interferes with their usefulness.

In this connection I may be pardoned a remark on one of the phases of progress in anatomy. We are constantly told that there is little room for further progress, and, indeed, the discovery of new organs is hardly to be expected, but yet within recent years our knowledge of the shape and position of organs has been decidedly extended. As an illustration, look upon this median section of a head, which, I dare say, many would not call antiquated. The fact that the mouth is open perhaps justifies the distance of the tongue from its roof. Notice the great distance of the soft palate from the back of the pharynx, and above all observe this apparently rigid tube, with a diameter a little greater than that of the trachea, rather suggestive of the Hoo-sac Tunnel, but in point of fact meant for the œsophagus. Those who have not the privilege of gazing on this work of art may console themselves by consulting Gray, where they will find almost as bad a figure, or the ninth edition of Quain, which has one taken from Sappey, which in one respect is even worse, for though the mouth is closed the dorsum of the tongue is below the line of the teeth of the lower jaw. Compare these with this enlarged copy which I had made two or three years ago from one of Braune's frozen sections. Observe how the tongue fills the mouth, how the soft palate rests upon it, how near the uvula is to the back of the pharynx, and that the œsophagus, especially at its beginning, is a mere slit between the spine and the trachea. Such a difference in our conception of the relations of important parts marks a real advance in anatomical knowledge of far greater consequence than many discoveries which from their nature are more readily admitted to the honors of anatomical nomenclature.

The demonstration which I am now to present, and which I first showed to the class about a year ago, seems to me to have the merit of showing the relations of the parts with a comprehensiveness that a frozen section does not furnish, and with an accuracy that cannot be obtained by dissection. It is made as follows: The calvaria being removed from an undissected head, and the cranial cavity cleared, a vertical cut is made on each side downwards from the free surface above close to the posterior border of the frontal process of the malar bone to a point behind the lower part of the prominence of the cheek. The anterior end of the zygoma is then divided, and the cut carried down to the bone. A horizontal cut is now begun at the tip of the nose just above the openings of the nostrils, and carried outward to meet the lower end of the first. The septum is then divided, except at its posterior extremity, and a small saw being introduced, the walls of the upper jaw are divided at the level of the last cut, that is, just above the floor of the nasal cavities. It remains to carry the vertical cut across the base of the skull a little in front of the optic foramina and thence downwards to meet the horizontal one. It is evident that they will meet at the lowest part of the pterigo-maxillary fissure, and that all the face above the roof of the mouth will be removed. Theoretically the hard palate remains attached to the pterigoid processes, but the bony connection is so very delicate that it is almost inevitably broken. This ac-

¹ Read before the Surgical Section of the Suffolk District Medical Society, May 16, 1883.

cident, however, is of no consequence, as the parts retain their positions. The posterior part of the septum remains in place.

The separated piece gives an excellent view of the nasal cavities and their relation to the antra and to the orbits, but as these points are not unfamiliar we will pass to the main portion. Here we see the floors of the antra, that of the nasal cavities, and the soft palate. This is no thin veil, as when its muscles are nicely dissected, but a thick fold. We can verify the statement that the hard palate appears to the touch to extend further backward than is the case, owing to the tense fibrous expansion of the *tensor palati*. We can explore the cavity of the mouth, and can study the position of the soft palate all the better from being able to examine both surfaces.

We can now proceed in various ways; perhaps the best is to divide the attachments of the lips and cheeks to the upper jaw, to separate the hard palate from the soft one, and to remove the former. We now see the shape and position of the tongue, and how, except for some small space around the tip and edges, it fills the mouth. We can show how easily, by falling back, the tongue may close the larynx, how short is the distance from the uvula to the epiglottis; how, the mouth being closed, the pharynx is a long tube opening by the posterior nares, and by how slight a movement of the soft palate the upper part of the pharynx may be shut off. The remaining part of the septum being now removed, we can note the shape of the upper region of the pharynx; the obliquity, cutting off the angle at the junction of the skull and spine; the pharyngeal tonsil and bursa; the Eustachian tubes and the deep fossæ of Rosenmüller, caused chiefly by the projection of the cartilage of the tubes. Beneath the soft palate we see the pillars of the fauces and the tonsil. Having examined these points we remove the soft palate and study the deeper parts of the pharynx, which narrow like a funnel, to end apparently in the larynx, behind which there is a very narrow transverse slit leading to the œsophagus. A prominent vertical fold is formed on either side by the posterior pillar of the fauces. Remembering that the œsophagus begins at the lower border of the cricoid we have the opportunity of testing Tillaux's statement that it is fifteen centimetres from the line of the teeth, and any one can easily convince himself of the impossibility of reaching it with his finger through the mouth. No doubt many other points might be alluded to, but my object is simply to call attention to this demonstration, which I think is a very instructive one.

THE EFFECT OF RECUMBENCY ON THE LENGTH OF THE SPINE.

BY E. H. BRADFORD, M. D.

THE so-called physiological curvatures of the spine, not found in the fœtus or in infants unable to sit up, but invariably seen in other individuals, result from the necessity of curves in balancing the trunk with its anterior load of viscera when in the erect position, and in carrying the head erect. These curves are: a long one, with the concavity forwards, involving the whole dorsal and upper lumbar vertebræ, and two shorter ones in the cervical and lumbar region, with the concavity backwards.

Though a great deal has been written on the subject of these curves, the effect of recumbency has received little attention. This, however, is of some theoretical importance in the consideration of the value of the different methods of treating curvatures of the spine. The fact that a person is taller in the morning than at night has been long known, and has been attributed to the expansibility of the intervertebral cartilages. To quote Brodhurst¹: "The effect of pressure on the intervertebral cartilages is shown by the loss of height which is sustained at the end of the day. Thus it is well known that a man of middle stature who remains in the erect position during the day will lose nearly one inch in height, and that this is regained only after he has been in the recumbent position for six or eight hours."

Adams also takes the same view. There "can be no doubt that this diminution in height is entirely due to the compressibility of the soft intervertebral substance;" also, quoting Mr. Bishop: "When the trunk has been kept in the erect posture during the day an adult man of middle stature loses about one inch of his height, which he does not regain until after having remained some hours in a recumbent position."

Mr. Adams found the average loss in height during the day in young and growing persons, as well as adults, varies between half and three fourths of an inch.²

Eulenberg,³ accepting these statements as facts, explains the phenomena, not on the supposition of expansion of the intervertebral substances, after rest (the accepted theory), but under the belief that the muscular system is stronger after the night's rest, and is better able to hold the spine more nearly erect. He quotes the measurements of a French observer, who found that the height is temporarily greater after each meal, and explains the fact in the same way.

E. Noble Smith, in his recent monograph on the Curvatures of the Spine, repeats the statements made by Bishop, Adams, and Brodhurst.

There can be no doubt of the loss of height from the continued erect position. It is, however, also true that lying down immediately lengthens the body to a considerable extent, a fact which has apparently hitherto escaped the attention of writers.

The following measurements illustrate this fact:—

No.	Age of Individual.	Height in Erect Position.	Length in Dorsal Recumbency.	Difference.
1	28	5 feet 8 1-2 in.	5 feet 9 1-4 in.	12-16 inch.
2	40	5 feet 1 6-16 in.	5 feet 2 1-16 in.	11-16 inch.
3	33	5 feet 7 10-16 in.	5 feet 8 1-16 in.	7-16 inch.
4	15	5 feet 8-16 in.	5 feet 1 1-16 in.	14-16 inch.
5	22	5 feet 8 inches.	5 feet 8 10-16 in.	10-16 inch.
6	29	5 feet 8 12-16 in.	5 feet 9 inches.	4-16 inch.
7	30	5 feet 11 14-16 in.	5 feet 4-16 in.	6-16 inch.
8	22	5 feet 11 8-16 in.	5 feet 11 12-16 in.	4-16 inch.
9	31	5 feet 2 inches.	5 feet 2 12-16 in.	12-16 inch.
10	35	5 feet 4 18-16 in.	5 feet 5 5-16 in.	8-16 inch.
11	8 1-2	3 feet 1 8-16 in.	3 feet 2 4-16 in.	12-16 inch.

The result was the same in eight other measurements made, but which were not recorded, and in all cases where such measurements were made.

¹ On Deformities, London, 1871.

² Lectures on Curvature of the Spine.

³ Real Cyclopædie, article Rückenmarks. Krümmungen.

⁴ I am indebted to Dr. A. Post for these measurements.

The following measurements are also of interest : —

Age.	Measurement.	Erect.	Recumbent.	Difference.
85	Evening, 10 P. M.	5 feet 4 13-16 in.	5 feet 5 5-16 in.	8-16 inch.
	Morning, 7 A. M.	5 feet 5 2-16 in.	5 feet 5 14-16 in.	12-16 inch.

They indicate not only that the height of the same individual is greater in the morning than in the evening, but also that the length of the body is greater in the recumbent position in the evening than is the height in the erect position in the morning, as well as the fact that a person is longer in the recumbent position in the morning than in the same position at night.

The above facts can be explained both on the supposition that the intervertebral substances expand, or that the physiological curves diminish on recumbency; but as the amount of height gained by a night's rest is not as great as the length gained immediately by the recumbent position, it seems most probable that the change is due simply to the palpable effect this position would have on the long physiological curve. This view is also supported by the fact that the greatest proportionate gain was in the measurements of the most flexible spine, namely, that of the child; and that too in a spinal column, which having less weight to support would suffer less compression of the intervertebral substances.

A CASE OF COLD ABSCESS.

BY RICHARD COLE NEWTON, M. D.,

Assistant Surgeon United States Army, Fort Cummings, New Mexico.

M. G., a Mexican ranche man, aged twenty-four, presented himself for treatment at the Post Hospital, Fort Stanton, New Mexico, in the month of July, 1881. He lived about seven miles away. He gave the following history: Had always enjoyed good health. Denied all venereal lesions. He was closely questioned on this point, but denied all syphilitic manifestations. He was a very intelligent man, and I believe spoke the truth. I think, however, that he had a hereditary specific taint, although I never could obtain other evidence of it than the course of this illness. Some months before I saw him, after several hundred miles of hard riding, herding, and driving wild cattle, the patient found that he had bruised his side by wearing a pistol so that the handle rubbed against his body. After this a swelling appeared and increased gradually in size. In April, 1881, he consulted Dr. Lane, of White Oaks, New Mexico, who opened an abscess in the same position as the one to be described, and evacuated a large quantity of pus. The incision was allowed to close, and no further treatment seems to have been pursued.

On physical exploration I found the scar of the former incision. This had evidently been made into an abscess which now moderately distended the right half of the epigastrium, and the left of the right hypochondrium. The scar was just below the xiphoid cartilage. The swelling was so sensitive that no attempt was made to map it out exactly by percussion and auscultation. A considerable deposit of pus was suspected in or beneath the chest wall, overlying the right lobe of the liver. There was no local heat nor redness, and no throbbing nor bruit, merely a dull pain and sense

of weight. Physical examination of the heart and great vessels and of the lungs gave negative results. There was no cough or other symptom of pulmonary trouble. Patient complained only of weakness and pain in his side; both of these troubles were increasing. He was pale and anæmic to a great degree, and had lost much flesh. Some hectic flush on cheeks. Pulse rather feeble. Tongue pasty, with thin, whitish coating. Bowels regular. Appetite fair. Cod-liver oil and mixed treatment (pot. iod., ten grains, and hydrag. bichlor., one twelfth grain, three times a day) were prescribed, and patient was told to paint the swelling with iodine.

During the following month the swelling gradually increased in size. In September, during my temporary absence from the post, the patient was seen by my colleague, Dr. Francis H. Atkins (late of United States Army), and was found weaker, and suffering more pain. The abscess seemed to be pointing at the site of the former incision (a little below and to the right of the xiphoid cartilage). He was given a tonic and morphia pills (one eighth grain) to allay the pain.

On the 25th of September I was summoned in haste. I found the man much worse than I had ever seen him. Something must be done, and I concluded that evacuation of the abscess was the only course. Dr. Atkins strongly suspected a hepatic abscess, and that did seem more reasonable than a cold abscess of the chest wall in this position. However, I plunged a scalpel into the pointing part, and followed this by a trocar and canula. About one and one half pints of sanguinolent, inodorous pus were extruded in good part by pressure. The incision was more than an inch in depth. Blood from this, and a grumous, blackish material also flowed into the basin. All these matters soon coagulated spontaneously. No further interference with the abscess was deemed prudent. A pad of oakum was bandaged against the orifice. The man was told to continue his tonic, and take five grains of quinine morning and evening in addition.

September 27th. Patient felt a little better. The incision was nearly healed. I forced the nozzle of a universal syringe into the wound, and thoroughly washed out the cavity with water *pretty strongly carbolyzed*; about one half as much matter came away as at the opening of the abscess two days before. The discharge appeared the same as the other, but did not coagulate. A probe entered the cavity for about five inches, where it had considerable play. To reach the bottom of the cavity the probe must pass downwards for about two inches, then *around* the conjoined cartilages of the right lower ribs, then directly to the right and somewhat downwards. The difficulty of measuring the exact size of the abscess cavity was insurmountable, or nearly so, without an anæsthetic, and the position of this cavity, impinging as it must upon the liver and the peritonæum, caused me to be extremely careful about my explorations. Before opening the abscess I had laid down a rule for myself to be very cautious and gradual in all my proceedings.

A drainage tube was now introduced with some difficulty, the rise and fall of the chest walls during respiration tending to extrude the tube. After a while I substituted a plug of oakum for the rubber tube, and liked it much better. There was now little doubt that the condition was that of a simple cold abscess, not communicating at all with the liver. The only other possibility was that it depended upon a malignant

growth. The discharge to gross appearance might favor this view, as well as the general condition of the patient. His age, however, was in his favor. I have never to my recollection seen such contents of an abscess cavity except once, in a case of Pott's disease, in which there was extensive bony necrosis. Necrosis of bone or cartilage in this case was carefully looked for, but never found. It is, of course, possible that such a condition may have existed, and from the peculiar conformation of the abscess cavity have eluded discovery, but the subsequent course of the case renders this hypothesis very improbable, and that of carcinomatous growth quite so.

To resume our history: The patient was ordered to take twenty grains of quinine daily and a pill (one eighth grain) of morph. sulph. occasionally. The tonic mixture was suspended. There had been some febrile symptoms present the two previous evenings.

September 28th. Patient sent for me in haste. Said that he had passed a miserable night. That the discharge from the wound had stopped toward evening; that his belly had begun to swell; and that he was in great pain until three A. M., when the discharge was reestablished spontaneously with relief to the pain. Had had fever toward night, and had sweat profusely before morning.

He was very weak and distressed. Facies dark and anxious. Hectic flush on cheeks. Tongue pasty. Pulse feeble. Clammy perspiration on his body. He evidently considered himself in *extremis*, and not without reason. Ordered to partake freely of milk punch, and to take thirty grains of quinine a day. The wound was unmolested except to change the dressings. A large quantity of the same grumous material found upon these. This was now quite fetid.

September 29th. The patient feels better and can sit up in bed. The drainage tube is now in place and the discharge is free. Gave a hypodermic injection of Magendie's solution, and washed out wound with carbolyzed water. I now think that pure carbolic acid was used in excess; so much was used because it seemed well to stimulate the "pyogenic membrane," so-called, that presumably lined the interior of this cavity. Ordered ten grains of quinine and one eighth grain of morph. sulph. at three and at six P. M., with a view of anticipating and controlling the evening rise of temperature that seemed to follow the washing of the wound.

October 1st. The patient was usually seen only every other day, because he was so far away from the Fort. On this date he said that about one hour after the last washing out of the abscess he experienced a chill, followed by fever which lasted about four hours, terminating in a sweat, after which he fell asleep and slept until morning. No chill or fever on the next day. To-day feels cheerful and talks of getting out. Appetite better. Bowels regular. Marked improvement. The discharge is considerably diminished; is still very fetid, though it is beginning to look more like laudable pus; foul gas escapes with the wash water.

October 3d. Washed wound again. Other treatment same, except that the plug of oakum has taken the place of the drainage tube, and quinine has been decreased to fifteen grains daily.

October 5th. Found the man walking about his door yard. His wound is now discharging a moderate amount of laudable pus. There is still some foul smelling gas which escapes with the wash water. He

was ordered to resume his tonic (two grains quin. sulph., one thirtieth grain strychn. sulph., two drops ac. nit-muriat., twenty drops tinct. ferri chlor., one half ounce syr. et aq. q. s. ut ft. 3ss.) four times daily.

October 30th. About the middle of this month the patient was put on the pills of the protiodide of mercury (one fifth grain), one pill three times a day. These produced some tenderness of the gums in five or six days. They were discontinued, and cod-liver oil given again. On this date the mixed treatment was added to the oil. The probe still passes into the abscess cavity for over three inches, but its play is much restricted. The discharge is now laudable (sweet smelling) pus. The cavity is slowly filling up. The pain attending the washing of this cavity has steadily increased, so much so that the man will scarcely allow me to do more than pretend to wash it out. This appears to be a good sign; at least, I think that it means that a healthy granulating surface is more sensitive than the pyogenic membrane which used to line the cavity.

November 13th. Have not seen the patient for several days. He had driven nine miles away when I called. His wife reports that he is very well, that he has no pain, and that the discharge is very slight.

November 28th. The man came into the post. A "warm abscess" had formed in median line just above the orifice of the "cold" one; and had opened spontaneously into the old sinus. Should judge from the man's account that about a pint of laudable pus had escaped from the new abscess. His general condition continues to improve. Complains that the mixed treatment which he has taken for a month, has made his jaws sore. I substituted ten grains kali. iod. and one fluid ounce ext. sarsapar. three times a day. Esteem it a good indication that, if the man must have another abscess, he can now have an acute one, with "heat, swelling, pain, and redness."

February 3, 1882. Have heard of the patient from time to time. He has been able to attend to his business. On this date he wrote me from White Oaks (thirty miles away) that he was sick with a bad pain in his left side, and was "bad off." I did not see him, but in a few days he was well again.

When I left Fort Stanton, 11th March, 1882, the man was at work as a teamster, and was, I presume, all right.

Remarks. I now believe that the "chills and fever" complained of after the washing of this cavity, especially at first, were due to carbolic acid poisoning, for the following reasons:—

(1.) I used the acid rather extravagantly, hoping to stimulate the walls of the cavity to healthy action.

(2.) If not so produced, these manifestations were due, probably, to hectic (septicæmia) or to malaria. If due to either of these causes, they would hardly have followed the washings, which were at irregular intervals, so closely, and have appeared at no other times (except slightly on the day of the first incision and its successor).

(3.) As the wound grew healthier the pain of the washings increased, but the bad after-effects diminished, because the healthier surface, while more sensitive, was less absorbent. It should be added that the patient's general condition was so far improved that he could withstand deleterious influences of any kind better. On the other hand, on account of the pain, the patient, although very tractable, would not permit the later washings to be so thorough as the earlier ones.

(4.) Had these symptoms depended upon the admission of air to the wound and the decomposition of the effete matters, why was not the evening following the opening of the abscess the worst time, instead of that following its first washings?

There never was a counter-opening made.

The urine was not examined, as it certainly would have been if carbolic acid poisoning had been suspected at the time.

No pulse nor temperature record was kept.

The case could have been much more satisfactorily treated had not seven miles of bad country intervened between the surgeon and his patient.

The amount of carbolic acid (pure) used was two to three drachms to a large basin of wash water. Carbulated vaseline was used on the dressings.

The case has seemed to me worthy of record:—

(1.) Because I think that it furnishes another caution to the already considerable number reported that carbolic acid must be used with a great deal of circumspection.

(2.) Because this abscess simulated hepatic abscess so closely from its peculiar position.

(3.) Because it is quite likely that hereditary syphilis complicated this trouble, although I admit that there is no proof of this supposition in anything I have written.

(4.) Because, while it shows that cold abscesses must be treated with great respect, it, I maintain, goes to demonstrate that as a rule they must be incised. And

(5.) I think it also helps to show that surgery (operative) is only a handmaid to physio.

RECENT PROGRESS IN NERVOUS DISEASES.

BY S. G. WEBBER, M. D.

EMOTIONAL DISTURBANCE IN HEMIPLEGIA.

J. Luys¹ has noticed the exaggeration of emotional disturbance most decidedly in cases of left hemiplegia. The lesion is located in the middle regions of the brain on the right, and such as give rise to paralysis are from destruction of the convolutions of the insula, of the external capsule, and of the gray substance of the corpus striatum. In most of the cases observed secondary descending degeneration could be traced as low as the medulla. There was also an extension of the lesion backwards so as to implicate the bundle of fibres of the corona radiata, which passes to the posterior portion of the optic thalamus and the first temporal convolution, at the deeper and upper part of the fissure of Sylvius. Luys locates here the lesion which causes the emotional disturbance.

EPILEPSY.

William Alexander² reports five cases in addition to three reported November 19, 1881, where he tied one of the vertebral arteries in severe epilepsy which had resisted other treatment. As to three cases previously reported, he says that they remained free from relapse. In another case, not fully reported, in which the epilepsy was complicated with maniacal symptoms after, or in place of, the fits, these maniacal symptoms subsided as well as the fits, but a relapse took place in

¹ Recherches Nouvelles sur les Hémiplegies Émotives, L'Encéphale, 1881, page 378.

² On the Cure of Epilepsy by Ligature of the Vertebral Arteries, Medical Times and Gazette, March 11, 1882, page 250.

regard to both symptoms. The other vertebral was then tied without any bad effect, and both epilepsy and mania entirely disappeared, though after a while the patient had one or two slight fits without loss of consciousness and no mania. Five new cases are reported, and the author mentions that he has ten others under treatment. In three he has tied both vertebrals simultaneously without any bad effects. In all the amelioration has been decided, whether we have regard to the reduction of the fits or the improvement of the mental powers.

Dr. Radcliffe³ reviews the history of the introduction of bromide of potassium in the treatment of epilepsy by Locock, himself, Brown-Séquard, and others. He says he rarely gives more than forty-five grains a day. The bromide does not act kindly in cases where the memory is bad and the mental power generally enfeebled. It is not advisable to go so far as to produce "bromidism." In cases of *le haut mal* with much mental enfeeblement this medicine is very likely to be hurtful even when only given in moderate doses, and in the majority of cases of *le petit mal* the good to be done by it is barely appreciable. He thinks the bromide of potassium, bromide of sodium, and bromide of ammonium are very much on a par as to remedial value, while the last, having rather a larger proportion of ammonium, may be preferable. Iron he has found injurious. He thinks iodide of potassium and bicarbonate of potash may be useful adjuvants. Arsenic, hypophosphite of soda, and chloride of ammonium may be advantageously associated with the bromides. The hypophosphite of soda, he thinks, nearly doubles the remedial value of the bromides. As a tonic with bromides he prefers quinine or bark, or especially nuxvomica.

Speaking of diet, he says that his experience teaches that an epileptic is much more likely to get on satisfactorily who is not afraid to take a liberal allowance of fat, or butter, or cream, and who makes a point of stinting himself in nitrogenous articles of food, in butcher's meat more especially. He objects to the use of much milk if other food in plenty is used, but he is in favor of genuine "milk diet." He recommends a trial of buttermilk or sour whey in place of fresh milk, or rum and milk with the ordinary diet. He advises that the patient should have some occupation for his mind, and education should not be neglected. Sleep should not be too prolonged.

Robert Saundby⁴ advises the combination of the bromide salts with each other, giving the daily dose in divided portions so that the influence of the drug is kept up throughout the day. He invariably adds ten minims of tincture of digitalis to counteract any depressing tendency, enjoins attention to the bowels, and abstinence from alcohol, restriction as to animal food.

The most useful adjunct to the bromides is oxide of zinc, three to five grains, combined with one sixth of a grain of extract of Indian hemp.

Charles E. Beevor⁵ finds no loss of weight after epileptic fits. He carefully weighed patients in the morning, and again after the fit. In six cases of hystero-epilepsy, treated in a similar manner, there was no alteration in weight.

³ Medical Annotations concerning Epilepsy, Paralysis, and Other Disorders of the Nervous System, Practitioner, February, 1883, page 89.

⁴ The Treatment of Epilepsy, Practitioner, February, 1883, page 105.

⁵ British Medical Journal, July 8, 1882, page 56.

François-Franck and A. Pitres¹ have given a valuable contribution to the study of epileptiform convulsions of cortical origin. They experimented upon animals, and found that these convulsions can be produced experimentally only upon a limited number of species, the cat, dog, and ape being easily influenced, the rabbit and guinea-pig only with difficulty; in birds, batrachians, and fish no convulsions could be produced. Electricity was the most likely to give rise to the attacks, coarser mechanical irritations having effect only when the cortical substance was inflamed, and so abnormally irritable. If the irritation was applied to the white medullary substance, just below the cortex, to the basal ganglia, or to the internal capsule, there was simple contraction of sets of muscles, no epileptiform convulsions. The motor region of the cortex was most readily excited to cause convulsions; parts removed from that region would not cause these unless the irritation was very intense. The excitability of the cortex is increased by strychnia, absinthe, atropia, cannabine, and by a slight degree of inflammatory irritation. It is diminished or destroyed by inhalations of ether or chloroform producing anaesthesia, by intravenous injections of chloral, by asphyxia, by applying ether spray directly to the cortex.

The epilepsy produced by experiments upon the cerebral cortex may be transmitted to the offspring, in whom, however, no appreciable cerebral lesion is to be recognized.

Unverricht² reports the result of his experimental and clinical investigations in regard to epilepsy. His conclusions agree in many respects with those of Franck and Pitres, though some points have been more fully elaborated.

PARALYSIS IN INFANTS.

W. R. Gowers³ and W. H. Barlow⁴ give interesting remarks upon disease of the anterior cornua of the cord. Names are rather multiplying for this affection, and confusion is likely to arise therefrom. As knowledge of obscure nervous lesions increases, it may be well to change names, but a too early change is undesirable; in these two papers are given three different names, besides these we have *anterior poliomyelitis* and *cornual myelitis*; the name selected by Gowers is preferable clinically, the two last names, one the equivalent of the other, are preferable if a pathological basis of nomenclature is chosen.

Gowers calls to mind our ignorance of the nature of the process in the spinal cord, and appeals to the general practitioner to investigate the point; he also can increase our knowledge of the relations of the disease to teething by supplying facts in regard to the age of patients and the state of dentition at the time of the onset. Barlow believes it is the condition of the nervous system at the period of the dental evolution that predisposes to the attack, by rendering the body more susceptible to external impressions, rather than the evolution itself. Barlow gives further statistics as to the season when the disease is most frequent. He finds that of 111 cases thirteen occurred in June, twenty-six in July, twenty-two in August, ten in September,

equal to seventy-one in the hot months; that is, more than half. This agrees with the observations made in this country by Dr. Wharton Sinkler.

Barlow also gives the ages of 149 patients at the time of the attack: fifteen under six months; twenty-seven between six and twelve months; fifty-two between one and two years; forty-two between two and five years; three between five and seven years. Gowers mentions one patient who was probably attacked *in utero*; also one, a man, more than seventy years of age at the time of the attack. Barlow found that convulsions preceded the paralysis in fourteen out of 149 cases.

Gowers calls special attention to the early use of electricity as a means of diagnosis, using it six or eight days from the onset. The faradic current is to be used. If the nerves are degenerated the muscles do not contract under its influence; the motor nerves depend upon the large nerve cells of the anterior cornua for their nutrition, and the nerve fibres undergo degeneration when the cells are destroyed. The widespread paralysis seen at the onset depends on damage too slight to cause degeneration, and it soon passes away. The muscles thus affected present no change in their reaction, and do not waste; those which derive their nerves from the part most damaged, show the reaction of degeneration. By the electric examination not only is the diagnosis established, but we can pick out and foretell which muscles will be ultimately most affected.

Gowers also calls attention to the value of an exact record of the electrical reactions of muscles as a method of studying the nerve supply of muscles and of recognizing those which physiologically act together.

For treatment in the earliest stage Gowers suggests that attention should be directed rather to the morbid process — the internal inflammation — rather than to the seat of that process; that aperients, diuretics, and agents which act on the vascular system should be used rather than nervine remedies; during the period of recovering using the latter and electricity and skilled rubbing.

James Ross⁵ reports several cases with remarks. The spasmodic paraplegia may be due to disease of the spinal cord occurring during the birth of the child, yet all cases cannot be explained in this manner. There may, in cases not thus caused, be an arrest of development of certain portions of the nervous system. It would appear, however, that arrest of development of the pyramidal tract is associated in the cases hitherto examined with a congenital lesion in the motor area of the brain, and it will probably be found that these conditions always coexist. If that be the case, we may expect that at least a considerable proportion of cases of spastic paraplegia, are really cases of bilateral hemiplegia, caused by a parencephalous defect of the cortical motor centres of the affected limbs, and arrest of development of the fibres of the pyramidal tract, which would have sprung from these centres. He thinks clinical observation shows that the brain is affected.

SYMMETRICAL GANGRENE (SYMMETRIC ASPHYXIA) OF THE LEGS.

M. Weiss, of Prag,⁶ gives first a historical résumé

⁵ On the Spasmodic Paralysis of Infancy, *Brain*, January, 1883, page 473.

⁶ Ueber sogenannte symmetrische Gangrän (Raynaud's "Locale Asphyxie und symmetrische Gangrän"), *Zeitschrift f. Heilkunde*, vol. iii., 1882, p. 233.

¹ Archives de Physiol. Norm. et Path., July, 1883.

² Arch. f. Psych. und Nervenkr., vol. xiv., 1883, p. 175.

³ Remarks on Acute Spinal Paralysis, *British Medical Journal*, May 20, 1882, p. 729.

⁴ Remarks upon Regressive Paralysis; chiefly as seen in the young subject (so called infantile paralysis, acute spinal paralysis, etc.), *ibid.*, page 734.

of the subject, with a brief abstract of the cases which have been previously reported. He then gives a long account of a patient who was affected with the disease, the parts attacked being the fingers and toes, the left cheek, the sacral and gluteal regions. This is followed by a brief sketch of the symptoms, course, and duration of the disease.

The so-called symmetrical gangrene differs widely from other neuroses in the disturbance affecting nearly the whole of the nervous system, but especially the vaso-motor nerves, and in the gangrene which is generally localized in the terminal phalanges of the fingers and toes. Like other neuroses, the symmetrical gangrene almost always appears in paroxysms. In many patients there is a prodromic period, in which appear psychical symptoms of a depressive nature. Without any cause there is a sense of unrest, and a change of character; a patient who had been previously good-natured and happy becomes surly and peevish, withdraws within himself and avoids contact with those whom he formerly sought, even his own children; continual sighing and frequent tears show how serious is the disturbance. Sleep is restless, broken by frightful dreams. Appetite is poor, digestion is difficult, and the slightest excess beyond the demands of appetite is followed by severe gastric crises, such as are seen in ataxia. The special senses are also affected, hearing becomes difficult, taste is altered, sight is dimmed. The intellect is not affected, there are no hallucinations; motor power is not disturbed. Soon peculiar sensations are felt in different regions of the body, and a paresthesia limited to one or both corresponding limbs attracts attention to the patient's condition. This does not continue long; the affected limb becomes the seat of severe neuralgic pain, which persists without intermission, almost without remission, and affects unfavorably the nutrition. With the advent of the pain, most probably because the patient's whole attention is absorbed thereby, the psychic disturbance becomes of secondary importance; only one wish remains — to be freed from the pain. These pains always precede the severer attacks of the disease, even when there is no mental disturbance; they are at first spread over the whole extremity, later, however, they are concentrated in that portion which is to suffer mortification. With the pain appears a marked vaso-motor disturbance — ischemia, cyanosis, or redness on the fingers and toes of the affected limbs, sometimes also in other parts, and when the vascular disturbance becomes habitual it acquires a greater intensity and extent. In some patients manifold trophic disturbances are seen; erythematous spots of variable size appear in spots on the affected limbs; there may be neurotic synovitis with infiltration of the subcutaneous cellular tissue above and below the affected joint, or increased growth of the epidermis, morbid changes in the nails, atrophy of certain muscles, with diminution of their direct and indirect irritability for both forms of electrical current. There may also be symptoms of paralysis of the cervical sympathetic, disappearance of the fat from the cheeks. Finally, there is gangrene of the terminal phalanges of individual fingers or toes, rarely of other regions of the body.

This gangrene begins thus: a line of the skin, or a round spot, from the size of a pin's head to a pea, on the pulp of the last phalanx (more rarely on the dorsum) acquires an appearance resembling parchment, as if the spot had been touched lightly with a white-hot iron. This spot becomes darker until after one or

two days it is black, or blisters filled with bloody serum form, and after they burst the excoriated spot acquires a dry, black appearance. In either case the further course is the same, and the only variations depend upon whether the gangrene shall attack only the superficial cutaneous tissues or the other deeper structures. In the first case after four or five days the dried epidermis falls off, leaving, perhaps, a superficial ulcer, which heals slowly; but if the deeper structures are attacked, the whole or half the phalanx is mummified, and with more or less inflammatory reaction is separated from the healthy tissue. After this is removed the stump cicatrizes in one or two months' time. The stump is usually rather club-shaped and irregular from infiltration of the subcutaneous tissue. The duration of the entire attack from the first prodrome to cicatrization is two to four months. The process is unaccompanied with fever, and the other functions are normal; the pulse is only somewhat more frequent than normal; the general nutrition is disturbed by the pain and sleeplessness.

The author considers the reasons for believing this affection to be a neurosis of the vaso-motor system, and those for looking upon it as a trophoneurosis. His conclusion is that the disease is primarily a vaso-motor affection; that the trophic and other phenomena are secondary.

Hastreites has written on the same subject.¹

LOCOMOTOR ATAXIA.

A. Eulenberg² considers the curability of locomotor ataxia. In 300 cases he has had three recoveries, the patients remaining well for several years, in one case eight years. The characteristic symptoms disappeared, and there remained only insignificant traces of partial anæsthesia. The proportion of cures is small, but he recalls the fact that in a disease that has been considered incurable a proportion of recoveries so small as one in 100 is encouraging. The treatment was not the same in each case. He used galvanism, hydrotherapy, and nitrate of silver; the silver was used in two of the three. He recommends the subcutaneous injection of a silver albuminate.

HEREDITARY ATAXIA.

L. Rüttimeyer reports³ several cases resembling Friedreich's hereditary ataxia. Eight were in one family, and three in another. It appears sometimes as early as four years, sometimes as late as the eighteenth year. The disease is quite different from progressive locomotor ataxia; there is not the lancinating pain; the ataxic gait appears early, and soon there is incoördination of the upper extremities; the speech shows disturbance of coördination, and there is ataxic nystagmus; tendon reflex is absent; there is often a slight diminution of sensibility; muscular sense is not disturbed; at length there is paraplegia with contracture; bed-sores rarely form; there is no disturbance of bladder; the mind is not affected.

Rüttimeyer thinks the disease affects the spinal cord primarily, the medulla oblongata and corpora quadrigemina secondarily. Dr. William A. Hammond has also suggested that the medulla oblongata may be the seat of the lesion in this affection.⁴

¹ Ein Fall von symmetrisches Asphyxie der Unteren Extremitäten, Wiener Med. Presse, 1882.

² Berlin. kl. Wochenschr., Nos. 1, 2, 1883.

³ Ueber Hereditäre Ataxie, Virch. Arch., No. 91, 1883, p. 106.

⁴ Journal of Nervous and Mental Disease, July, 1882, page 530.

Hospital Practice and Clinical Memoranda.

DEATH FROM CARBOLIC ACID.

BY D. HOMER BATCHELDER, M. D.

MR. DAVID F., Scotchman, a man of respectable character and habits, fifty-six years of age, whose occupation was that of a designer and engraver. He was employed as such at the print works of A. & W. Sprague Manufacturing Company.

On the morning of the 23d of January last he arose and took his morning meal as usual. He then started to take the street car, which passed about half-past six A. M. The car had got by, and he stepped back into the house to wait ten minutes for the next car. During that time, he said to his wife, he did not feel very well, and would take a little wine before he went. He took what he supposed to be the bottle of wine and drank from it, no one knows how much, and immediately exclaimed in a broken manner, "My G—, what have I taken?"

He was at once thrown into the most excruciating agony. On examining the bottle, it was found that there were two pint bottles standing side by side on the shelf, one containing sherry wine, the other carbolic acid, full strength.

They undertook to administer some remedies themselves, using nearly an hour's time before they called me, although my house stands not over thirty rods from where the accident occurred.

When I reached the house, I found his eyes were rolled upward, cornea not visible, limbs rigid, with a very copious discharge of fibrinated mucous from the mouth, mingled with detached portions of the mucous membrane, while the pulse indicated nothing but a slight flutter or tremor of the heart. In less than fifteen minutes subsequent to my arrival life was extinct.

I am not aware of any specific antidote in cases of this kind of poisoning. This is my second case of poisoning from carbolic acid. Both were fatal, for I did not in either case arrive till the patient was in a state of *articulo mortis*.

My course would be, however, were I there in season, to put into the stomach as large a quantity as possible of either castor or olive oil.

As the effect is immediately destructive to the mucous membranes, I should say that in fifteen minutes after the poison had been taken, the passage to the stomach would be closed, and the only alternative would be to force it by the pump. But I am confident that after the expiration of fifteen or twenty minutes at most, all manipulative means of this kind must certainly fail to save life. The destruction is so immediate, so extensive, involving tissues which are so vastly important to life, that its highway is completely obstructed, and death is the only relief in such cases.

However, if there are any members of the profession who have had such cases to deal with, — I mean cases like these, where persons have drunk down the concentrated carbolic acid in quantity as those I have narrated, — it is to be hoped they will give a synopsis at least of their experience in the premises.

Reports of Societies.

PROCEEDINGS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

SEVENTH ANNUAL MEETING, HELD AT THE SAGAMORE HOTEL, LAKE GEORGE, AUGUST 29, 30, AND 31, 1883.

REPORTED BY HENRY WILE, M. D.

MORNING SESSION.

THE meeting was called to order by the president, DR. R. W. TAYLOR, of New York, who, in a short address, welcomed the members assembled.

The first paper, entitled, —

TREATMENT OF ACNE,

was read by DR. PIFFARD, of New York. The writer advocated the internal use of calcium sulphide. In the treatment of the acute papule he advised puncture of the lesions, together with application of hot water, after which some soothing ointment, as of belladonna or stramonium, especially the latter, in the form of the fluid extract made from fresh leaves gathered in the fall. The base of the ointment should be benzoated lard or oxide of zinc. In using the calcium sulphide it should be pushed until additional lesions appear, when it should be stopped. Comedones should be treated by pressure with the finger nails or key. In acne indurata ergot was advised.

DR. ATKINSON, of Baltimore, failed to obtain good results with calcium sulphide or ergot.

DR. VAN HARLINGEN, of Philadelphia, recommended the following paste for the treatment of the comedones: Glycerine three parts, acetic acid (U. S. P.) two parts, kaolin four parts, originally suggested by Nuna.

DR. ALEXANDER, of New York, had good results from the use of calcium sulphide in the pustular variety of acne. Ergot seemed only to diminish the redness.

DR. SHERWELL, of Brooklyn, said that he noticed some benefit follow the use of ergot in the pustular form in the female, where there seemed to be exacerbations at the menstrual periods. He regarded this form as a reflex process, and gave ergot on purely empirical grounds, and with good results.

DR. PIFFARD, of New York, thought that the beneficial results obtained in the treatment of acne depended upon the amount of irritation an agent created in the lesions. In the summary Dr. Piffard described a case which he regarded as one of the worst that ever came under his notice. The patient was treated for uterine disorder by a gynecologist, at the same time was given ergot internally and mercurial ointment externally. She recovered.

DR. TAYLOR, of New York, thought that the local treatment was of paramount importance, the internal treatment subsidiary. He placed great reliance on the use of alkaline salts. Rochelle salts ʒi. to ʒij., acetate of potash ʒss., three times a day in a wine-glass of water. In the indurate variety he punctures the lesions and applies acid nitrate of mercury, one part to eight parts of water. Where rosacea is present he advises the following: Chrysarobin ʒss., flexible collodion ʒi. He has seen no benefit follow the use of ergot. As valuable agents he recommends mercurial ointment ʒss., cosmoline ʒi.; also iodide of zinc gr. v. to gr. xv., adipis ʒi.

— A crematory for persons dead of infectious diseases is recommended by the grand jury of New Orleans.

DR. STELWAGON, of Philadelphia, recommended a lotion composed of zinc sulphate, potassium sulphuret, $\text{aa } \text{ʒi. to water } \text{fl}\text{ʒiv.}$

The next paper, entitled, —

GENERAL EXFOLIATIVE DERMATITIS,

was read by DR. GRAHAM, of Toronto. Dr. Graham gave a brief *résumé* of the literature, which he claimed was not extensive. He had had four cases. He thought that the disease existed in two varieties: first, dermatitis exfoliativa rubra; second, dermatitis bullosa et exfoliativa. The first might include pityriasis rubra, the second pemphigus foliaceus.

DR. HARDAWAY, of St. Louis, described a typical case of pityriasis rubra where arsenic was used for months without benefit. The use of the tincture of the chloride of iron gave good results.

DR. ATKINSON, of Baltimore, thought it impossible to describe a distinct disease under the name general exfoliative dermatitis. He thought it was symptomatic, and the result of different causes, especially neurotic; also, due to the use of drugs. Cases of recurrent scarlet fever have been found to be due to small doses of quinine.

DR. FOX, of New York, thought it advisable to group these various affections under this head with the exception of pityriasis rubra, which he thought was a distinct disease, and he could recall but two cases.

DR. MORROW, of New York, thought that the disease was essentially a trophoneurosis, and he has seen good results follow the use of arsenic.

In the summary, DR. GRAHAM said that he was inclined to regard the disease as a trophoneurosis, as in one case presented the general eruption was preceded by a herpes, which is of neurotic origin.

DR. TAYLOR, of New York, called attention to two cases of the disease, the photographs of which were exhibited. The first case, a lady, having suffered much from malaria, was accustomed to take quinine, and, according to her statement, she had ten or eleven attacks of scarlet fever. Quinine was given, and in twenty-four hours she had a scarlet eruption, followed later by desquamation. The second case, a boy aged nineteen years, had poor family history. Scaly eruption began on the wrists; soon extended to face, chest, and whole body. Desquamation was extensive. Lesion on the buccal mucous membrane, tongue; also fissures at the angles of the mouth, but these were not of a syphilitic nature. The subdermal tissue was not infiltrated, the process involving only the epidermis.

DR. PIFFARD, of New York, suggested the use of jaborandi in Dr. Taylor's last case. He had used it with success in ichthyosis.

DR. FOX, of New York, recommended the use of chaulmoogra oil.

The next paper was read by DR. STELWAGON, of Philadelphia, the subject being, —

IMPETIGO CONTAGIOSA.

The writer gave an account of the opinions and theories held by different authorities as to the nature of the disease. He was inclined to regard the disease as contagious and occurring in epidemics, also as systemic in character, in a way similar to variola and varicella, and that it had no connection with vaccination.

DR. HARDAWAY, of St. Louis, considered it an independent disease, on account of its contagiousness,

and, as Dr. Stelwagon says, its appearance in epidemics.

DR. ATKINSON, of Baltimore, claimed that many pustular eruptions seemed to acquire a contagious element in warm weather.

DR. ROHÉ, of Baltimore, said he felt convinced of the inoculability of the pus of impetigo contagiosa, having performed experiments upon himself.

DR. FOX, of New York, also believed the pus to be inoculable, and that the disease had no connection with vaccination.

DR. PIFFARD, of New York, said that he had seen a series of cases in a certain family follow vaccination. He thought the disease was of a parasitic nature. He had found a fungus which was the same as that found in vaccinia. To render the fungus visible he employed a solution of caustic soda, one part to five.

DR. TAYLOR, of New York, did not regard the disease as systemic. In sixty cases, observed by himself, the affection commenced about the nails and face. He regarded the disease as spreading by contagion; it always appears on parts accessible to the hands.

In the summary Dr. Stelwagon argued that the disease was systemic, in the nature of variola, varicella, etc. Five hundred microscopic examinations of the pus were made; three times the fungus of Piffard was found, ten times the fungus of Kaposi.

The next paper, entitled, —

MULTIPLE CACHECTIC ULCERATIONS,

was read by DR. ATKINSON of Baltimore.

The writer described in detail the case of a child upon whose fingers, legs, and, later, the face, appeared certain ulcerative lesions, which for a short time remained inactive, then assumed an active form, when the tissues were literally melted away by the process. The two terminal phalanges of the right forefinger were separated from their attachment and thrown off. The other lesions healed under treatment, leaving scars. The author regarded the process as a neurosis resulting from a disturbance of the vaso-motor centres which in turn caused nutritive changes.

DR. VAN HARLINGEN, of Philadelphia, described a case in which the patient, an old man, having suffered amputation of the left leg, exhibited lesions over the knuckles of the right hand, consisting of smooth blackened excavations the covering of which was later thrown off as a slough. On the right forearm was an ulcerated lesion about two inches by one and one-half inches surface, of a grayish color, and covered with a scant amount of secretion. The lesions remained inactive up to the death of the patient, which occurred in a few weeks.

DR. TAYLOR, of New York, presented two cases, one a child with an ulcer on its back, size of a silver quarter dollar. In spite of treatment the ulceration extended downward to the fascia and muscle, forming a lesion four inches by two and one half inches. By means of diet-tonics a cure followed. The other case was a woman. She appeared with a swelling on her nose, upon which was a bulla; the lesion began to break down, involving the surrounding tissue, and in healing left a contracted cicatrix. There were similar lesions on the fingers.

EVENING SESSION.

The first paper was read by DR. VAN HARLINGEN, of Philadelphia, subject, —

EXPERIMENTS IN THE USE OF NAPHTOL.

This remedy, a derivative of coal tar, which was introduced to the notice of the profession about two years ago by Kaposi of Vienna, has since been used in the treatment of various skin diseases. Kaposi's good results in the management of scabies, and to a lesser degree psoriasis, were confirmed by the writer; while although recommended very highly as a parasiticide and in the treatment of hyperidrosis, naphthol was not found to fulfill the promise made for it in these affections. Dr. Van Harlingen's experience found it of little value in the first and of no value in the second.

Dr. Fox said that he had used the drug extensively, and it did not give much satisfaction. It acted well in form of a lotion in some kinds of eczema of the scalp, also in eczema of the scrotum. In psoriasis of the face and scalp it failed altogether, and was not to be compared with the white precipitate ointment.

Dr. WIGGLESWORTH agreed with Dr. Fox, and did not believe that naphthol possessed any advantages over creosote, tar, carbolic acid, etc.

Dr. HARDAWAY found it of value in eczema fissurum of the hands.

Dr. TAYLOR used it in two cases of scabies with benefit; in cases of psoriasis it was found wanting.

LEPROSY.

The next paper, entitled *A Trip to Tracadie*, was read by Dr. FOX of New York.

The paper embraced a description of the hospital for lepers at Tracadie, New Brunswick, also the result of an examination of the cases of leprosy there seen. The conclusions, as presented by Drs. Fox and Graham, are as follows:—

- (1.) Leprosy is a constitutional disease, and in certain cases appears to be hereditary.
- (2.) It is undoubtedly contagious by inoculation.
- (3.) There is no reason for believing that it is transmitted in any other way.
- (4.) Under certain conditions a person may have leprosy and run no risk of transmitting the disease to others of the same household or community.
- (5.) It is not so liable to be transmitted to others as is syphilis in its early stages. There is no relation between the two diseases.
- (6.) Leprosy is usually a fatal disease, its average duration being from ten to fifteen years.
- (7.) In rare instances there is a tendency to recovery after the disease has existed for many years.
- (8.) There is no valid reason for pronouncing the disease incurable.
- (9.) Judicious treatment usually improves the condition of the patient, and often causes a disappearance of the symptoms.
- (10.) There is ground for the hope that an improved method of treatment will in time effect the cure of leprosy, or at least that it will arrest and control the disease.

The President suggested that the remarks should be confined to the following points: Clinical history, question of heredity, modes of contagion, duration, curability, treatment.

Dr. SIMMONS, of Japan, being present, was invited to take part in the discussion. This gentleman said that he had studied the disease for the last fifteen years. He claimed that it was difficult to study it in a hospital, where effect of climate, mode of life, etc., is not noticed. Among the first symptoms are a peculiar

lividity, blushing on least excitement, — then the anæsthetic spots. Its progress is often slow, extending over a period of years. He regarded the disease as hereditary, and spoke of the difficulty of obtaining a true history. It is the first question in marriage among the Japanese. He did not consider it contagious or infectious, and never had any fear of it. In Japan, when a man becomes the subject of the disease, he exiles himself, when a woman, she is put out of the way by her family. It occurs mostly among the wealthy, and in regard to treatment, the first thing is a thorough system of diet and hygiene. The best results are obtained with Gurjun oil, internally and externally.

Dr. ROHÉ thought that if leprosy spreads by contagion there must be a great difference as to the susceptibility on the part of individuals.

Dr. WIGGLESWORTH called attention to the fact that physicians and nurses are rarely if ever affected. He thought the disease was slightly contagious and feebly infectious.

Dr. GRAHAM believed in the contagiousness of the disease.

Dr. PIFFARD cited the case of Boileau, the physician of the island of Mauritius, as having had leprosy.

Dr. WIGGLESWORTH related a conversation which he had with Professor Boeck of Christiania, who had followed up the history of a Norwegian leper emigrating to America, and found that in one of the descendants in whom the disease had developed it seemed to have lost its virulence.

A paper was then read by Dr. SHERWELL, of Brooklyn, entitled, —

PAGET'S DISEASE, OR MALIGNANT PAPILLARY DERMATITIS.

The writer had found twenty-seven cases recorded. He reported two, the first one having been the first published in America. The description of the two cases was followed by the narration of some diagnostic points, for example, the burning, itching, and other subjective symptoms were more marked than in eczema. The "malignant papillary" feature was sufficient to resolve any doubts between it and true eczema.

AUGUST 30TH. MORNING SESSION.

A paper on the

PATHOGENESIS OF DRUG ERUPTIONS

was read by Dr. MORROW of New York.

The different theories as to the action of drugs in the causation of eruptions on the skin were given, and the writer inclined towards that theory according to which drugs produced some irritation of the central or peripheral vaso-motor centres.

The next paper, entitled, —

CHANGES OBSERVED IN THE NON-ULCERATING TUBERCULAR SYPHILIDE,

was read by Dr. TAYLOR of New York.

The writer cited a case which was kept under close observation for five months, and during that time a non-ulcerating tubercular syphilide was seen to undergo several changes. The lesions first became hypertrophic, then assumed a colloid nature like those in lupus. In some tubercles yellowish puncta appeared, which increased, coalesced, and looked like pemphigus syphiliticus.

DR. ATKINSON thought that the changes as observed by Dr. Taylor were evidence of the fact that syphilis may simulate all forms of cutaneous disease.

PSEUDO-PSORIASIS AND PSORIASIS OF THE PALM.

The next paper, entitled Pseudo-Psoriasis of the Palm, was read by DR. SHERWELL of Brooklyn.

The writer regarded psoriasis of the palm as the result of a concomitance, of a superimposed or congenitally double diathesis. He believed that the squamous eruptions on the palms (excluding eczema, etc.), resembling psoriasis, always had a specific diathesis for its base.

DR. ALEXANDER, of New York, read a paper entitled, Psoriasis Affecting the Palms.

The writer presented four cases of psoriasis of the palms, of a typical character, in all of which the most careful examination failed to show any sign of previous or existent syphilitic disease. Photographs of the cases were also exhibited.

DR. GRAHAM reported two cases of psoriasis of the palms with peculiar affection of the finger nail. There was no syphilitic taint.

DR. MORROW also reported cases without evidence of syphilis.

DR. TAYLOR said that he had seen three of the cases reported by Dr. Alexander, and could not upon the closest inquiry discover any traces of syphilis. He regarded psoriasis of the palms as beginning about the nails, and as probably of traumatic origin.

DR. SHERWELL still maintained his views, having seen cases of almost universal psoriasis without any lesion on the hands, then the patients acquiring syphilis, lesions would appear on the hands.

DR. ALEXANDER thought that the lesions on the palms may be evanescent and occur seldom on account of the friction to which the surface is subjected, this causing a rapid tissue change.

A paper was read by DR. WIGGLESWORTH for DR. HYDE, of Chicago, entitled, —

A STUDY OF THE COINCIDENCE OF SYPHILITIC AND NON-SYPHILITIC AFFECTIONS OF THE SKIN.

The writer discussed the coincidence of certain skin diseases with syphilis, dwelling particularly upon psoriasis, of which he offered two cases. Two patients affected with generalized psoriasis became syphilitic. Syphilitic eruptions followed, and under treatment gradually disappeared, the psoriatic lesion again appearing; the palms and soles were not invaded.

EVENING SESSION.

A paper was read by DR. TAYLOR, of New York, entitled, —

PECULIAR APPEARANCE OF THE INITIAL LESION OF SYPHILIS AT ITS BEGINNING.

Dr. Taylor presented two cases; in one the lesion was on the right lip of the meatus, in the other on the dorsum of the glans. The lesions were about the size of three pin heads, of a silvery, glistening appearance, non-elevated without fissures, and looked as if caused by application of nitrate of silver. The lesions remained superficial for two weeks, then developed into typical chancres.

A paper was read by DR. STELWAGON for DR. DUHRING, of Philadelphia, entitled, —

THE VALUE OF A LOTION OF SULPHIDE OF ZINC IN THE TREATMENT OF LUPUS ERYTHEMATOSUS.

The writer reported three cases which were obstinate and had resisted all modes of treatment; but the application of the following lotion was attended with marked benefit: —

R Zinc sulphate	{ ss 3i
Sulphuret of potash		
Water		q s iv.

DR. PIFFARD thought that to cure a lupus of any kind it must be destroyed, and this he claimed was best effected with the curette or by scarification. He doubted whether the remedy proposed would cure a case.

DR. ALEXANDER had practiced scarification sometimes with success, at other times aggravating the lesions. He doubted the efficacy of the remedy proposed by Dr. Duhring.

DR. SHERWELL used the remedy in acne, where it seemed to reduce the hyperæmia.

DR. VAN HARLINGEN saw one of the cases presented by Dr. Duhring, and could abundantly verify the claims as to the success of the lotion in that case.

DR. WIGGLESWORTH thought the disease was difficult to cure; he had, in several cases, used salicylic acid and chrysarobin, as advised by Dr. Fox.

DR. FOX said that he had used this combination with some success, but carbolic acid, pure, painted on the part, was in his experience the best remedy.

DR. PIFFARD thought the efficacy of a remedy in lupus erythematosus depended upon its ability to excite enough inflammation to strangle out the new cells.

DR. HARDAWAY claimed to have had success by electrolysis with a needle.

A paper was then read by DR. VAN HARLINGEN for DR. DUHRING, of Philadelphia, entitled Report of

A CASE OF AINNUM, WITH MICROSCOPICAL EXAMINATION.

The writer reported a case of ainnum occurring on the right little toe of a negro. The distal phalanx was removed by operation, and was exhibited. The clinical history of the case was followed by a full microscopical report prepared by Dr. Duhring's clinical assistant, Dr. Henry Wile.

DR. SHERWELL thought that the affection was a species of self-mutilation practiced by the lazy negro, — that it was probably akin to "ring toe."

DR. HARDAWAY reported five cases of

A PECULIAR PAPILLARY DISEASE OF THE SKIN,

in which the lesions were of a chronic type, of a peculiar lemon-yellow color, varying in size from a grain of wheat to a split pea, gave exit to a drop of blood on puncture, and had a pseudo-vesicular appearance. It disappeared promptly after the use of the following: —

R. Hydrarg. ammoniat.	{ ss 3i.
Liq. picis alk.		
Ung. petrol.		3i.

DR. WIGGLESWORTH thought the lesions described by Dr. Hardaway were new.

DR. ATKINSON recalled a case of a young negro woman who exhibited certain wart-like lesions on the cheek, which, being pricked, gave exit to a drop of blood.

DR. GRAHAM presented a case of

LYMPHANGIOMA CUTIS,

with photographs. The lesion consisted of a loose fold extending from the shoulder to the wrist of the right arm. The epidermis was much hypertrophied, was soft and velvety; near the elbow were deep furrows. Near the elbow was a large tumor, in which large dilated vessels were felt. The lesion could be reduced in size by compression or elevation of the part.

DR. ATKINSON said that he had a case similar to that of Dr. Graham. He thought the condition was one of densely infiltrated tissue, with enlarged lymphatics.

DR. PIFFARD suggested, in the matter of treatment, the galvano-caustic ligature.

DR. SHERWELL mentioned a case of lymphangioma cutis of a solidifying nature, where the lymphatics were indurated, so that the man could not sit down.

AUGUST 31ST. MORNING SESSION.

Microscopical specimens of malignant papillary dermatitis, also specimen of ainhum, were exhibited.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

H. C. HAVEN, M. D., SECRETARY.

MAY 16, 1883. Thirty members present. DR. J. P. REYNOLDS was elected chairman for the evening.

DR. A. N. BLODGETT read a paper entitled Dislocation of Sternal End of Clavicle and of First and Second Ribs at Sternal End.

DR. T. DWIGHT read a paper entitled, —

A NEW DEMONSTRATION OF THE CAVITIES OF THE MOUTH, NOSE, AND PHARYNX.¹

The paper was illustrated by a demonstration of the section according to the method described.

In the discussion which followed DR. CHEEVER said that the demonstration certainly gave a clearer idea of the proper relations of the parts than any other he was acquainted with, and he considered it of great value. Dr. Cheever had often been able to feel the arytenoid cartilages; in fact, often the projecting cornua of these cartilages are mistaken for foreign bodies. This mistake can be guarded against by recognizing that they are entirely covered over by mucous membrane; this is never the case with foreign bodies. Dr. Cheever spoke of the valuable information which can be often obtained by exploring the posterior nares with the finger. The relation of the parts as shown by Dr. Dwight's demonstration enforced the necessity of keeping the tongue well forward in case any obstruction to the passage of air existed during etherization. In connection with a remark concerning the relations of the tonsil, Dr. Cheever said he dissented from a statement made at a preceding section meeting, that abscess of the tonsil never causes death by suffocation. He had seen such a case.

DR. DE BLOIS spoke of a method of examination by which he had been able to remove a papillary growth from the vocal cords with the nail of his index

finger. The method consists in introducing the index finger between the cheek and the jaw until behind the last molar, and then going down. In this way the flexure between the first and second fingers comes against the angle of the mouth, which is pressed back, the other fingers lie on the outside of the cheek. Dr. De Blois thought he could gain half an inch in this way.

ABSENCE OF WATER FROM THE STOMACH AFTER IMMERSION OF A CORPSE.

DR. F. W. DRAPER called attention to the fact that the medico-legal point of water not being found in the stomach in cases where the body was put in the water after death was very easily understood if we considered the relations of the parts to be as the more recent diagrams showed us. According to the old ideas, however, according to which the oesophagus was an open tube, this absence of water would be inexplicable.

THE THIRD TONSIL AND DIPHTHERIA.

DR. BLODGETT spoke of the presence of the third tonsil as accounting for the readiness with which diphtheria attacks the posterior nares.

DR. D. W. CHEEVER was elected chairman for the ensuing year.

Recent Literature.

A New School Physiology. By RICHARD J. DUNGLISON, A. M., M. D., etc. 12mo. 314 pages. Philadelphia: Porter & Coates. (No date.)

This volume is intended for the instruction of children, and includes some practical hygiene. It is by no means abreast with the recent advances of physiology: witness the account of digestion, of absorption, of the functions of the cerebellum, etc., which all seem curiously antique. We also miss that vividness which comes from first-hand acquaintance with the facts described; for the volume appears to be a product of mere compilation, and not to be written with any expectation that the students shall see everything possible for themselves. As there are good books of this kind in which exist the qualities missed in Dr. Dunglison's school-book, we are unable to express a preference for the latter. It would have appeared very good ten or fifteen years ago, but fails to meet the requirements of to-day, since books alone no longer suffice for the teaching of natural science.

— A writer in the *Practitioner* says, in administering anæsthetics in excisions of the tongue it seems all-important that the anæsthesia should *not* be profound. He holds that partial insensibility only is admissible, and has seen more than one fatal case during removal of the tongue, the patient being profoundly insensible. He believes that if there be much or little bleeding, mop as much as you may, some blood trickles backwards, and little pools accumulate in the glosso-epiglottidean pouches, and flow over into the larynx, and the epiglottis, being held erect by the drawing forward of the tongue, cannot divert its course. On the other hand, the patient coughs up the blood if only *partially* under the anæsthetic.

¹ See page 244 of this number of the JOURNAL.

Medical and Surgical Journal.

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ACUTE PNEUMONIA. A PRELIMINARY REPORT OF THE COLLECTIVE INVESTIGATION COMMITTEE.

AN abstract of the report of a sub-committee of the collective investigation committee of the British Medical Association on the communicability of phthisis was recently given in the JOURNAL. Another sub-committee, represented by Drs. Sturges and Sidney Coupland, has rendered a preliminary report on acute pneumonia, which contains figures of interest as adding to our statistical knowledge of this very common, and, from a physiologico-pathological point of view, somewhat puzzling disorder. This preliminary report is based upon an analysis of 350 cases returned in answer to cards sent out by the committee. These cases were analyzed under nine different headings:—

(1.) *Sex, Age, and Mortality.* Of the total number of cases 229 were males and 120 females, the sex in one case not being mentioned. The proportion of males to females was therefore nearly two to one.

As regards age two cases are given of infants under one year; from that age to ten years there are 43 cases. Between the ages of ten years and sixty years there fall 269 cases, of which number 195 occurred between ten and forty years, the greatest prevalence being between ten and twenty, and twenty and thirty, each of these decades yielding 70 cases. Nine cases are given between seventy and eighty years, and one over eighty, who recovered. In seven cases no age is stated.

The question of mortality is considered from various points of view, so as to ascertain, if possible, particular external or internal conditions influencing the course and termination of the disease. These are: (a) sex and age; (b) habits and mode of life; (c) sanitary conditions of the dwelling; (d) the type of pneumonia, as shown by its mode of onset; (e) the extent of the pulmonary inflammation.

Of the 350 cases 282 recovered and 68 died, giving a general percentage mortality of 19.4. (a.) The percentage mortality among the males, on the other hand, was 18.7, and among the females 20.8. In regard to the proportion of cases and the ratio of mortality between males and females, as well as to the influence of age upon mortality, the reporters realize perfectly that the figures are too small for any definite conclusion, and offer them only as a contribution. So far as the cases go the rate of mortality rises with

each decade of life from ten years to forty; between ten years and twenty the mortality was 7.1; between twenty and thirty 11.4 per cent.; between thirty and forty 18.1 per cent.; between forty and fifty years the mortality, instead of continuing below the general average, is more than doubled, namely, 40.4; between fifty and sixty 34.3 per cent.; above sixty years of age the cases reported were too few to infer anything as to rate. (b.) As to habits and mode of life, 228 are recorded as "temperate," 80 as "total abstainers," and 37 as "intemperate;" in 30 cases the food was said to be insufficient. In regard to the relative mortality of cases thus classified the reporters think if any conclusion can be justifiably drawn from their figures it is "that whereas individuals of temperate habits and those who take a sufficiency of food incur about an equal liability to fatal pneumonia the total abstainers enjoy a far greater immunity; whilst among the intemperate the death-rate is very high indeed. The figures are, however, too few to permit of such a deduction, except, perhaps, in the case of the intemperate, where the result is in accord with general experience. An insufficient supply of food, which in many cases goes along with alcoholic excess, does not, according to these results, seem to be so fatal a determining factor as the latter." (c.) The returns afford no evidence that insanitary surroundings form a main factor in the occurrence of a fatal type of pneumonia. (d.) Neither do they offer evidence that the type of pneumonia attended with a fatal issue differs from that of non-fatal cases. (e.) Of the 68 fatal cases one lung alone was involved in 37, namely:—

Right side, apex 1.	Base 17.	Apex and base 4.
Left side, apex 2.	Base 10.	Apex and base 3.

Both lungs were attacked in 31 cases, the signs being limited to the apices in one case, to the bases in 22. The whole of both lungs was affected in two cases; the whole of the left lung and right apex in two; left lung and right base in two; and right lung and left base in two.

(2.) *Sanitary and Meteorological Conditions.* This question the reporters regard as "a most difficult one, not, perhaps, to be determined by statistical results or by such facts as can alone be gathered by an inquiry like this." In one half of the 350 cases the sanitary condition of the houses in which the patients lived was reported as "indifferent" or "bad;" and one half of the districts in which pneumonia was reported to be prevalent were said to be "indifferent" or "bad" in sanitary respects. In only about one third of the cases was the sanitary state "good" as regards both house and district. The reporters conclude that, "although it would thus appear that insanitary conditions play a not inconsiderable part in the aetiology of pneumonia, it is impossible to question the fact that marked influence is exercised by special meteorological states. Without venturing to assert in what this influence precisely consists, we think that few would deny that the state of the atmosphere as regards barometric pressure, humidity, temperature, and direction of the wind, does operate in exciting or favoring the development of this disease. . . .

"Reserving the full analysis of the weather conditions registered in these 350 cases, we may state in general terms that more than one half of the total number of cases arose when the weather was damp or wet, and even a larger number when it was cold, the combination of cold and wet being particularly favorable for the development of the disease."

(3.) *Specific Infectious Diseases Prevalent along with Pneumonia.* The result of this inquiry tends to negative the belief in any direct or intimate connection between pneumonia and any of several specific or infectious affections, — such as enteric fever, diphtheria, tonsillitis, erysipelas, etc., — which are apt to prevail coincidentally with it.

(4.) *Family and Personal Histories.* The material analyzed by the reporters teaches, as far as it goes, that individuals who become subjects of pneumonia do not exhibit in excess any particular morbid predisposition; that the liability to this disease is not transmitted; that one attack of pneumonia does render an individual rather more liable to a second attack. Thirty cases of recurrence are reported out of 350. There was a phthisical family history in but 34 of the 350 cases reviewed. The common rule in the cases reported and surviving, with very few exceptions, was complete recovery without sequelæ.

(5.) *Mode of Onset.* The following is a numerical analysis of the differences in the modes of onset: —

"Premonitory symptoms were present in about 270 cases.	
Premonitory symptoms were absent in about 80 cases.	
Rigor occurred at the onset in	241 cases.
Rigor was not present at the onset in	39 cases.
Cutarrhal symptoms preceded the attack in	40 cases.
Cough symptoms preceded the attack in	29 cases.
Headache symptoms preceded the attack in	53 cases.
Malaise symptoms preceded the attack in	49 cases.
Erysipelas symptoms preceded the attack in	1 case.

"The total number of cases in which *gastro-intestinal* symptoms were present was 59; in seven of these after the onset of the pneumonia. Of these symptoms, nausea and vomiting occurred in 35; in 21 of which a rigor ushered in the declared symptoms. Diarrhœa was the only symptom in 13 cases (in one, No. 71, with hæmorrhage); a rigor occurring in eight. Vomiting and diarrhœa existed together in but three cases, in one of which there was a rigor. Thirteen of these cases were fatal, or 22 per cent. of the number so attacked, a figure somewhat above the average mortality."

(6.) *Seat of Lung Inflammation, Days of Crisis, etc.* In regard to the seat of lung inflammation we quote the words of the report: "(a.) The situation of the lung inflammation is a point of interest in reference to the proportion of cases of double pneumonia, and of so-called apex pneumonia; as well as to the comparative frequency with which this or that locality of the lung becomes the seat of attack. The general belief in the greater frequency of *right* pneumonia is here borne out by 108 cases in which the right base was affected against 86 of the left base; and 16 of the right apex against 10 of the left. That the inflammation should have been confined to one or other apex in but 26 cases out of the whole number is re-

markable. We venture to think (and are supported in this belief by the present returns), that 'apex pneumonia' is apt to occur in groups at certain times and seasons, and that ultimately the above proportion will be found to be below the average.

"In one instance, a fatal case, verified by post mortem, both apices are affected, a solitary example which calls attention to the extreme rarity of pneumonia of this seat, and contrasts strikingly with 76 cases where both bases are involved. Next in rarity is the implication of both bases along with one apex. This combination occurs in but five cases as regards the left apex, and in but three as regards the right apex. By far the commonest seat is the right base.

"In 334 cases the numbers are: Right base, 108; left base, 86; both bases, 76; right apex, 16; left apex, 10; right base and apex, 12; left base and apex, eight; both bases and right apex, three; both bases and left apex, five; whole of right, three; whole of left, four; 'whole of both lungs,' two; middle lobe, one."

(b.) A comparison of the number of cases ending suddenly with those that had a gradual subsidence gives 138 of the former to 168 of the latter, "in other words, the crisis of acute pneumonia, to which many attach importance as among the indications of the specific character of the pneumonic fever, is more often absent than present." (c.) The days of crisis are generally supposed to fall, when they manifest themselves, somewhere between the third and the eighth day. Out of 290 cases 65 had their crisis on the seventh, and 43 on the sixth day, while the number ending in crisis on the eighth day are but 29, less than half those on the seventh. Crisis later than the eighth day is very exceptional. It is in this series more frequent on the tenth than on the ninth day (29 to 19). There are but seven instances of crisis on the eleventh day, and but two at any later period.

(7.) *Communicability of Pneumonia.* Twelve returns were received, supposed to be illustrations of the conveyance of pneumonia from person to person, but their analysis is reserved.

(8.) *Epidemic Pneumonia.* The returns received under this head are interesting as far as they go, but rather ambiguous.

(9.) *Treatment.* As between the restorative and stimulant, and the depressant or sedative treatments, the committee's returns show a strong preference in favor of the former, the number of cases treated on the former plan being five times as many as those treated on the latter. Antipyretic drugs — quinine in 61 cases, aconite in 51, digitalis in 25, the salicylates in 14 — were resorted to somewhat generally; the cold bath not at all, and we believe very properly, for it has shown itself least safe in pneumonia; cold sponging in five cases; and the wet pack in two; venesection is reported in only one case.

In conclusion the reporters state that within a year they expect to have at their command for analysis at least 1000 cases of pneumonia, a number sufficiently large, they think, to serve to set at rest many of the questions regarding pneumonia which are at present problematical. A final and detailed report will event-

ually be published. While desiring, therefore, to avoid any statement seeming to imply a final opinion upon their present material, they feel justified in saying that "the evidence as yet collected does not suffice to warrant the conclusion that the so-called acute croupous pneumonia is of specific origin."

THE ADAMS NERVINE ASYLUM.

THE sixth annual report of the Adams Nervine Asylum particularly attracts our attention, in part because it is the first report of that institution which has made its appearance on the editorial table, — it is only the second report which has been printed for distribution, — but more particularly because the institution itself is somewhat peculiar and exceptional in its character, and does its work so unobtrusively that little is known of its workings.

The report contains very accurate and abundant information in regard to the asylum, which was established in accordance with the will of the late Seth Adams "for the benefit of such indigent, debilitated, nervous people, who are not insane, inhabitants of the Commonwealth of Massachusetts, as may be in need of the benefit of a curative institution." Patients were first received in February, 1880, in the dwelling house on the estate, near the Bussey Institution, in Jamaica Plain, purchased by the asylum, and the new building specially erected for the purpose was first used in December, 1880. Rooms are provided for about thirty patients, and only female patients are received at present.

The number of patients under treatment during the year has been 105; of these seventy-six were admitted during that period. Their average stay in hospital was three and seven tenths months. Of the thirty-seven discharged as recovered the average length of treatment was about four and one third months.

The applications for admission reach the astonishing number of 371, which the superintendent considers a fair indication of what the future demands on the resources of the asylum are likely to be. He does not believe that it in any way indicates an increase of nervous disorders among women, but that it affords evidence of the urgent need felt for special facilities in the treatment of nervous derangements, and especially for such facilities as are afforded in this asylum.

Though no specific plans are mentioned for the increase in the accommodations it seems a fair inference that a gradual enlargement is contemplated, as after some changes in the grounds during the past year the asylum now owns seventeen and a fraction acres, and has erected during the past year a special building for the use of the nurses, which contains twelve chambers, with sleeping rooms in the basement for other employees. The possession of this building is evidently a matter of great satisfaction to the management, as the want of similar accommodations is a matter of discomfort at other institutions. "By means of it," to

quote the report, "our nurses are now enabled to obtain that relief from the exacting cares and depressing influences of their vocation which their health and comfort demand."

Several very interesting tables are given showing the various conditions and relations of the patients, but no special deductions are drawn from them, perhaps because the numbers are too small. These tables show that of the seventy-six females admitted for treatment forty were unmarried, twenty-seven were housewives or housekeepers, nine were teachers, and twenty-six were of no occupation. No tabulation of distinct diseases is given, but the following observations on treatment are instructive, and sufficiently interesting to give entire: —

"The value of 'rest and seclusion' as remedial agents is an exceedingly interesting question in view of the rather indiscriminate application which has been made of this treatment to all forms of nervous disturbance whether of cerebral, spinal, or peripheral origin. This method of treatment is of great value in many disorders, the characteristics of which were mentioned in last year's report. In hysteria it assists by its discipline in regaining self-control, but *not* in melancholia, either of a mild or severe type. On the contrary, its use in cases of *depression* invariably aggravates rather than soothes or mitigates the symptoms, and I do not resort to it in the treatment of this class of patients. In nervous exhaustion, so called, whether of cerebral, spinal, or mixed types, it is more certain of satisfactory results than any other plan yet tried. It retards waste, checks morbid activities, and prevents the drains and lesser strains so fruitful in perpetuating this condition. Whether imaginary or real, the confused thought, the supposed loss of memory or its sudden lapses, the weaknesses of vision, the irregular and varied forms of circulatory disturbances, the disturbed digestion, the motor irregularities, incapacity for work, insomnia, and all other symptoms, speedily disappear under its judicious use seldom to reappear."

Dr. Page's ideas on this subject are given at length in this journal, vol. cvii., p. 77.

In reference to the stability of the cures, Dr. Page says: "As the asylum is comparatively new, having been in practical operation less than four years, and therefore not rich in experience, it is impossible to base upon its results conclusive or reliable deductions. In general, however, it may be stated that heredity and temperament exert an important influence in determining this question. It is well known that heredity carries with it from one generation to another abnormal anatomical peculiarities, as, for instance, supernumerary fingers and toes. So neurotic traits, whether psychological or not, to a much greater degree manifest themselves in parents and children for successive generations. Even disturbed nerve functions, like migraine and neuralgia, perpetuate themselves in different members of a family through a long line of descent. Always quiescent in good health, these neuroses promptly manifest themselves whenever nutrition is seriously disturbed."

MEDICAL NOTES.

—Malarial diseases are reported by the secretary of the Connecticut Board of Health, as unusually prevalent in places like Manchester, where they have more recently appeared, while in the places where they first appeared but little prevalence is noted, and the deaths from typhoid fever exceed those from all forms of malarial fever. Still, even in these places, there has been quite a number of cases of acute intermittent fever, which has not been noticeable before for several years. Upon the whole, however, the malarial influence appears to be waning very decidedly and its effect upon other types of disease less marked. The sale of quinine at the drug stores has rather decreased in comparison with that of former years. The progress into new territory is slow; but few towns report cases. Hampton, in Windham County, reports a few cases. This is one of the hill towns with little swampy land comparatively. Several cases are reported from Watertown, Naugatuck, Monroe, Had-dam, Suffield, Windham, and Westport, but in general malarial diseases occupy a much less prominent place, while typhoid fever is increasing in frequency.

—“*A Good Plan.* — £10 and upwards judiciously invested in Options on Stocks and Shares often give handsome profits in a few days. Full details in *Explanatory Book gratis and post free,*” etc. This advertisement from one of the best of the English medical journals is a kind of announcement which, with all the “enterprise” of American medical publishers, we do not remember to have seen in any of our professional periodicals. Can it be possible that American doctors are too old birds for the fowlers to waste their chaff upon?

—It is said that in a recent suit for divorce in Ohio an interesting pathological question was raised. It was claimed that a fibroid polypus of the uterus was developed by the conduct of a man in courting a woman. Long courting, causing the woman to think of her speedy entering upon the duties of a wife and mother, produced such disorder in and about the uterus as to cause the growth of the tumor.

NEW YORK.

—Typhoid fever seems to be on the increase, an unusually large number of cases having been reported since the 1st of September. Between the first and seventh of the month there were over sixty cases registered, and twenty-five deaths from the disease.

—Dr. James Dowling Trask, a distinguished practitioner of Astoria, Long Island, died on the second of September. He was born in Beverly, Mass., in 1821, and was a graduate in arts of Amherst College. He received the degree of M. D. from the University of the City of New York in 1844, and subsequently the honorary degree of M. D. was conferred on him by the Medical College of Buffalo, N. Y. He was professor of obstetrics at the Long Island College Hospital for a number of years, and throughout his professional career made many valuable contributions to medical literature, principally in the field of midwifery and gynecology. Among them was an

essay on *placenta prævia*, embodying researches and statistics of permanent value, which received the prize of the American Medical Association in 1855.

—Dr. Charles Wright, senior medical examiner of the New York Life Insurance Company, died in London, Eng., September 2d, of congestion of the lungs resulting from Bright's disease. Dr. Wright was graduated from the Medical Department of the University of New York in 1853, and after a few years spent in general practice was appointed, in 1862, assistant medical examiner of the above insurance company. Upon the death of the late Dr. Wilks, in 1876, he was made a medical director of the company. At the time of his death he was treasurer of the board of trustees of the New York Academy of Medicine, and he was universally respected in the profession.

—A physician, who kept a drug store at Alleghany, New York, recently made the mistake of putting up for a patient five grains of morphia powders instead of quinine, and the man having died from the effects of one of them, he was so overcome with grief on hearing of the catastrophe that he committed suicide by taking morphia himself.

Correspondence.

SHRINKAGE IN CIRRHOSIS OF THE LIVER.

MR. EDITOR, — I should like to learn from some of your numerous readers in how short a time, in a case of cirrhosis of the liver, shrinking may take place. I saw in consultation, the 21st of June, a lawyer, forty-two years, a hard drinker, whom both the attendant and myself regarded as having cirrhosis of the liver in the enlarged stage. Heart and lungs sound. The liver extended in the mammary line from the sixth intercostal space to the umbilicus, and was both tender to touch and rough on surface and edge. Although the patient's father had died of cancer of the stomach, we thought cirrhosis would account for all the symptoms, even the coffee-ground vomitus. I saw him again July 18th, and there was no marked change, save the liver was a third smaller; there was no ascites, and no tumor in epigastrium. On August 16th I again saw him, when I found him much weaker; pulse feeble; face haggard; eyes jaundiced; slight emaciation; still tenderness over liver and in epigastrium; no marked pain; some ascites. At this time the liver dullness was not over two fingers' breadth in the mammary line. Just before my visit the patient had vomited up a chamber vessel full of coffee-ground blood. We still thought it a case of simple cirrhosis, though we did not overlook the possibility of cancer of stomach also. The next morning the patient died, and I made the same afternoon the autopsy.

Only abdomen opened. There was no ulceration or infiltration of stomach, which, with intestines, was full of coffee-ground blood. The liver was one third normal size, deep yellow in color, dense, and covered with nodules from size of pin's head to pea; on section it cut with a creaking sound, and offered considerable resistance to knife. The kidneys were fatty and enlarged. Unfortunately, I did not lay open the whole duodenum.

I have inquired of several of my professional friends

regarding the time requisite for the shrinking, and they seemed to think it a very slow process; books seem to give no data for an opinion. In this case between the 20th of June and the 16th of August the liver had shrunk from between seven and eight inches to less than two as measured in the mammary line. Specimens for histological examination were not to be had.

Very sincerely yours,

WILLIAM WOTKYNs SEYMOUR, M. D.

TROY, N. Y., September 5, 1883.

IODOFORM ABSORPTION AND INSANITY.

MR. EDITOR.—The case of pemphigus pruriginosus, as reported in your journal¹ by Dr. G. M. Garland, I read with a great deal of interest, so much the more as the result of the treatment with iodoform in a disease so little amenable to treatment was all that could be desired. Dr. Garland dwells with right on the mental disturbances accompanying the treatment. Will he allow me to ask him whether he would not think it possible that this mental disorder originated from the effect of the absorbed iodoform applied to two hundred and eighty ulcers? and most satisfactory as the local application of the drug turned out to be, whether we have not an iodoform poisoning to deal with, the result of which was insanity in the case?

If I am right, mental disorders belong to the train of symptoms in iodoform poisoning.

Very respectfully yours,

GUSTAVE LIEBMANN, M. D.

467 COLUMBUS AVENUE, BOSTON, MASS.

Miscellany.

EDUCATION IN THE MEDICAL PROFESSION.

MR. EDITOR.—There is certainly no excuse at the present day for the lamentable ignorance of physicians who hold diplomas from reputable medical institutions. Two courses of lectures, apart from any preliminary examination upon matriculation, seem to satisfy the large majority of students, and at a time, too, when they possess advantages far above the physician of half a century ago. With but one or two exceptions no entrance examination is required by medical schools of those applying for admission, and the college graduate is placed upon a par with those hardly possessing a knowledge of the first elements of a sound English education. Look at any catalogue of a medical school, and we will find that hardly more than ten or twelve per cent. of those whose names appear in its pages are college or academical graduates. Every day the percentage of students increases, but not an increase of those who can claim any great educational acquirements. So instead of the medical profession keeping pace with the culture of the times, it has scarcely reached the high-water mark of the old-time physician, who made use of every means which paved the way to success and eminence.

Instead of struggling with questions of codes and ethics (and this chiefly among those whose lack of preliminary culture peculiarly unfits them for entering upon the discussion at all) the modern physician should be made to see the necessity of a wide and liberal

culture ere entering upon so important a vocation as the practice of medicine. Hence no encouragement should be given those who are without this preparation, for a physician who has passed his prime has neither the time nor the inclination to remedy the defects in his early education, nor the discipline which such study always confers upon him.

The Massachusetts State Medical Society has for some years past insisted upon a preliminary examination of every candidate who applies for fellowship. This consists not only in the English and Latin languages, but also in his knowledge of his profession. The Rhode Island Society has now adopted a like practice, whereby it is hoped all applicants will be subjected to a system of "sifting," and thus be preserved the honor of the Society. In two State societies, at least, the simple possession of a diploma is no longer an index of the owner's fitness to practice medicine.

Medical schools can do much to aid State societies in this work. Harvard, Yale, and the University of Pennsylvania require entrance examinations of all students who propose to commence the study of medicine. Other schools do not as yet even insist upon attendance upon *three full courses of lectures* before the student is allowed to graduate. As a consequence the country is flooded with hosts of unqualified physicians, their diplomas being merely vouchers of their unqualifications.

But so long as the money question forms so large a factor in the medical curriculum we fear that the time will be far distant when its influence will cease to bias all attempts at reform. So long as State legislatures continue to incorporate medical schools of little or no merit, with teachers who take this cheap way of advertising their indifferent skill, the educated physician must still become a dream of the future. Such a practitioner scarcely ever learns the art of study; never studies long enough to master the first principles of his profession. He knows just enough to pass "muster," to pass an examination which it is for the interest of the examiner to make as easy as possible. Hence the greater the number of graduates the larger the amount of money at his command, especially in the future, for students flock to those institutions where the requirements are the least, and the expenses smallest, a medical education being measured in dollars and cents and the brevity of the course of instruction. And yet it is not so much the fault of the student as the teachers. Temptations are continually held out to an unthinking class which they cannot in the nature of things overcome.

A last method of cure lies in the practitioner himself. He should refuse to instruct pupils unless they are possessed of a fair education, an education which only academies of high order and colleges can give. If honest attention be given to this subject legalized charlatanism will no longer be a disgrace to the profession, nor shall we hear longer of half-caste physicians, and an overcrowded profession. The worse elements will all be carefully weeded out, the profession of medicine attain an eminence far beyond the reach of the sneers of the laity. Only in this way may the medical profession redeem its honor, and hold its place among the learned professions, for, if the truth must be told, it is to-day far, very far, from occupying the enviable position which it might.

Yours,

F. C. CLARK.

9 THOMAS STREET, PROVIDENCE, R. I.

¹ No. 8, volume cix.

SOME POINTS REGARDING THE USE OF BROMIDES IN EPILEPSY.

In a lecture by Professor Dujardin-Beaumetz (*Medical Record*, August 25th) on the treatment of epilepsy, we find some hints regarding the form and method of administration of the bromides in this disease. In answer to the question, what is the active principle in the bromides, the bromine or the base, the author replies:—

"The bromide plays a considerable part in this depression of the bulbar functions, but the base does not by any means remain inactive or inert. And this it is which explains the difference of action of the different bromides. We know, especially since the labors of Laborde, that the salts of potash have a much more marked depressant action than the salts of soda, and that they have a toxic effect on the heart in particular. Already, when treating of purgatives, I showed you the difference which exists between the salts of potash and of soda; there is the same difference between chlorate of potash and chlorate of soda, as Laborde has shown; also between bromide of potassium and bromide of sodium, the first being more active than the second, while on the other hand the sodium salt is better tolerated than the potassium salt.

"I have made many trials of bromide of sodium in epilepsy, and notwithstanding the considerable doses exhibited, ten to twelve grammes (150 to 180 grains) a day, I have never succeeded in arresting attacks either of petit-mal or grand-mal by this salt. I have, therefore, been astonished to see in Hammond's remarkable work on Nervous Diseases that this eminent neuropathologist gives the preference to bromide of sodium in epilepsy.

"By the side of bromide of potassium we must place bromide of ammonium, which has a still more powerful action than the first; then bromide of calcium, with which I have never experimented, but which is much employed in America, and especially by Hammond. The latter, while giving the preference to bromide of sodium, considers bromide of calcium superior to the potassium salt; one gramme producing a sleep which is calm and refreshing. His vehicle of administration of the calcium preparation is syrup of the lactophosphate of lime.

"I have enumerated the alkaline bromides, of which the most employed is assuredly bromide of potassium. These bromides are often associated in prescription, a mode of administration called the *mixed bromides*.

"There are other bromide compounds which are sometimes given, as the bromide of zinc and bromide of camphor. Theoretically, the zinc bromide should be a good preparation, since zinc oxide possesses anti-epileptic properties, as we have before seen. Bromide of zinc is used in England and America in the form of a syrup. Hammond speaks highly of this salt in epilepsy.

"Introduced into therapeutics by Deneffe, of Brussels, and investigated chemically by Clin, therapeutically by Bourneville, bromide of camphor has been employed in the treatment of hysteria and epilepsy, and although favorable results have been obtained at the Salpêtrière, yet this preparation has not come into general use. Thus far the bromide of potassium remains the medicament, the most active and most employed in the treatment of epilepsy.

"The quantity of bromide which ought to be admin-

istered daily is very variable. From twelve to fifteen grammes a day have been given; the medium dose, in the majority of cases, is eight grammes. This dose cannot be given from the first; you must begin with smaller doses, as one gramme morning and evening, and gradually increase the dose till you have obtained complete control of the disease. Voisin thinks that we should regard as the maximum dose that which determines abolition of the reflex sensibility of the pharynx. I believe that this is an excellent rule in the case of hysteria, but not in epilepsy, and that in this disease we must not only attain abolition of pharyngeal reflex irritability, but we must, if occasion demand, push the administration of the remedy even farther, till we have stopped the attacks. But it is absolutely necessary to have a bromide preparation which is chemically pure, for Voisin has shown that the impurities of this salt considerably modify the therapeutical effects which it produces."

The writer considers that bromism, uncomfortable and even dangerous as that condition is, is to be accepted as preferable to the disease for which it is administered, especially in the delirium of action, which makes the epileptic a criminal without his knowing it, and when it is necessary to employ the bromide in massive doses in order to overcome the mania which impels him, unconsciously, to deeds of violence. Nothing, in fact, is more curious than to see in the wards of our lunatic asylums men enjoying their intelligence and their reason who have committed, and would still commit, the most astounding murders if their maniacal propensities were not kept in check day by day by immense doses of bromide.

How long should you continue the bromide treatment of epilepsy? Often a very long time, and even during the entire life of the patient. When, moreover, you have obtained the full benefit of the drug, and have witnessed complete cessation of the attacks, you must not leave off abruptly the medicine, but must keep on with it for several years, gradually diminishing the dose, as Legrand du Saulle has advised.

IRON AND ARSENIC IN ANÆMIA AND CHLOROSIS.

A PAPER in the *Practitioner* (July and August, 1883), by Dr. Willcocks, presents an interesting clinical and pathological study of the blood in these diseases, illustrated by a large number of cases. He is led to the following among other conclusions:—

In severe anæmia either the power of corpuscle formation is almost entirely abolished or young corpuscles, if formed, have little or no power to absorb hæmoglobin, and consequently do not reach their full development. The comparatively large size which the hæmatoblasts attain without the absorption of any appreciable quantity of coloring matter would go far to show that the embryonic corpuscles are more or less abortive. Iron in these cases is useless beyond a certain point, the existing corpuscles being already overcharged with hæmoglobin. These facts forcibly bear out the hypothesis enunciated at an earlier page as to the probable hæmatinic action of iron, namely, that it possesses no power of directly stimulating the formation of new corpuscles by any influence on the cytogenic organs, but that it improves the hæmoglobin

richness of already existing corpuscles, which are added to the blood by the normal processes, and consequently by improving their physiological value and vitality it indirectly increases their number. Therefore in cases like those under consideration, where the natural power of sanguification is greatly reduced, or almost abolished, iron has little or no beneficial effect, since either very few new forms are produced, or even if they are added to the blood they have little or no capacity to absorb hæmoglobin and to develop into adult corpuscles.

Chlorosis is in striking contrast to the most severe forms of anæmia both as regards its blood lesion and its response to iron treatment. In chlorosis the supply of young, feebly-colored corpuscles is abundant, and the number of red disks per cubic millimetre may fall in many cases but slightly below normal. The average hæmoglobin richness per corpuscle is greatly reduced, and the curative effect of iron is very rapid. A low average hæmoglobin value per corpuscle is not, however, peculiar to chlorosis, but is present in the large majority of anæmic cases from all causes. It indicates that feebly colored or young elements are being continually added to the blood, or, in other words, that the normal process of globule regeneration is active, the numerical rise preceding the rise in the physiological value of the elements. It is in these cases that iron is indicated. Arsenic was given in two cases of chlorosis, but it had no influence either in preventing relapse on the cessation of iron or in improving the number or value of the red corpuscles (Case I. and Case IV.). On the other hand, in the most intense forms of anæmia, with great diminution in the number of the corpuscles, and a high relative hæmoglobin value, iron is practically useless, or even harmful, while arsenic, as we see in the case of Caroline F., may produce a considerable rise in the number of the corpuscles, as well as great improvement in the general symptoms.

HYPERIDROSIS MANUUM.

MR. H. A. SMITH writes, in the *British Medical Journal*, concerning this affection, which occasions some ladies such heavy gloves' bills: Moisture of the hands (local hyperidrosis) is a purely functional disorder of the skin, due to disturbances of the nervous system. Stout women, generally servant girls, suffer from it, although the fair votaries of the ball-room and members of good society, together with those of lithe and nervous habit, occasionally come under notice. It may or may not be attended with pain and inflammation, dysidrosis or fetor-osmidrosis, or, more rarely, pigment-chromidrosis. As a rule, the axilla and feet sympathize more or less. As the condition appears to be due partly to abnormal vascular conditions, but mostly to irritability or undue stimulation of the vaso-motor nerves, probably of central origin, the following lotion will be found exceedingly useful:—

R Liq. plumbi subacetatis 3ij.
 Sp. vini methylati 3i.
 Aqua roseæ ad 3x.
 Fiat lotio.

The lotion to dry on, and the hands subsequently to be dusted three times daily with powder composed of equal parts of calamine and starch powders. The patient should wash the hands always in cold water, and well dry them, and should avoid malt and all fermented liquors, pickles, spices, tea, and coffee (taking cocoa),

and be sparing in the use of sugar. The lotion failing, she should wash the hands thrice daily with carbolic acid soap in soft water, in which half a drachm of extract of belladonna has been previously dissolved, and take a pill containing valerianate of zinc, two grains; quinine, one and one half grain; and extract of belladonna one fourth grain, with conf. rose q. s. t. d. s. A mixture (if any tingling or burning in the fingers) containing bromide of potassium, digitalis, and a vegetable tonic will complete the treatment. The belladonna, besides causing vaso-motor paralysis, contracts the unstriated muscular fibres surrounding the arterioles going to supply the sweat gland, and carbolic acid has a benumbing effect on the nervous filaments supplying these and the papillæ of the skin proper.

CONTROLLING HÆMORRHAGE IN AMPUTATION AT THE HIP-JOINT.

MR. JORDAN LLOYD describes in the *Lancet* (May 26th) a new method which he has several times employed for controlling hæmorrhage in amputations and excisions at the hip-joint. It is an adaptation of Esmarch's method. The limb is first elevated and stripped of blood. A strip of black India-rubber bandage about two yards long is then doubled and passed between the thighs, its centre lying between the tuber ischii of the side to be operated on and the anus. A common calico thigh roller must next be laid lengthways over the external iliac artery. The ends of the rubber are now to be firmly and steadily drawn in a direction upward and outward, one in front and one behind, to a point above the centre of the iliac crest of the same side. They must be pulled tight enough to check pulsation in the femoral artery. The front part of the band passing across the compress occludes the external iliac and runs parallel to and above Poupart's ligament. The back half of the band runs across the great sacro-sciatic notch, and, by compressing the vessels passing through it, prevents bleeding from the branches of the internal iliac artery. The ends of the bandage thus tightened must be held by the hand of an assistant placed just above the centre of the iliac crest, the back of the hand being against the surface of the patient's body. It is a good plan to pass the elastic over a slip of wood held in the palm of the hand, so as to diminish the pain attending the prolonged pressure of the rubber bandage. In this way an elastic tourniquet is made to encircle one of the innominate bones, checking the whole blood-supply to the lower extremity. The elastic bandage may be secured above the iliac crest in the usual manner with tapes, and may be prevented from slipping downward by being held with a common roller tied securely over the opposite shoulder. Experience has shown, however, that no mechanical means answer so well as the hand of a trusty assistant. When the band is once properly adjusted the assistant has only to take care that it does not slip away from the compress or over the tuber ischii. The former is prevented by securing pad and tourniquet together with a stout safety pin, and the latter by keeping the securing hand well above the iliac crest, or even more safely by looping a tape beneath the elastic near the tuber ischii, passing it behind under the sacrum and having it held in that position. The solid rubber tourniquet may be used instead of this bandage. I prefer, however, the bandage. The soft parts are less

damaged by reason of its greater breadth, and it is less likely to roll off the compress placed over the external iliac.

The ligature, being altogether above the limb, is out of the way of the surgeon in any operation at or about the hip-joint. The great trochanter is fully exposed, the hip being free upward as far as the iliac crest, and inward to the perinæum.

The bandage has the following advantages over Davy's lever: (1.) The simplicity and certainty of its application; no previous experience being necessary to compress the vessels, there is no possibility of going

wrong. (2.) The security with which the vessels are controlled, regardless of the movements of the patient or manipulations of the operator. (3.) The freedom from danger of injury to the rectum or abdominal contents. (Davy related a case at a recent meeting of the London Clinical Society in which he himself had wounded the rectum with his lever, the patient dying on the following day of peritonitis.) (4.) Its applicability to cases in which the rectal lever could not be employed, as in strictures of the bowel, intra-pelvic growths, and arterial abnormalities. (5.) It requires no special apparatus.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 1, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Diarrhoeal Diseases.	Typhoid Fever.
New York.....	1,206,590	558	241	28.64	12.24	4.12	16.29	2.33
Philadelphia.....	846,984	381	164	28.60	1.05	8.40	10.76	2.89
Brooklyn.....	566,689	262	136	30.94	15.66	3.06	22.00	.76
Chicago.....	503,304	220	121	37.62	11.82	3.63	20.00	5.00
Boston.....	362,535	205	92	32.67	10.74	3.90	24.40	3.90
St. Louis.....	350,522	165	72	29.69	7.27	6.66	11.51	6.06
Baltimore.....	332,190	144	79	32.62	9.72	6.25	11.80	2.78
Cincinnati.....	255,708	99	39	17.17	11.11	1.01	10.10	1.01
New Orleans.....	216,140	111	34	32.72	9.99	—	6.36	—
District of Columbia.....	177,638	65	21	24.64	12.32	4.62	12.32	3.08
Pittsburg..... (1883)	175,000	53	29	41.58	5.67	13.23	16.12	3.78
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	70	51	35.75	7.15	10.02	20.02	1.43
Providence..... (1883)	116,755	51	21	31.36	13.72	1.96	23.52	3.92
New Haven..... (1883)	73,000	32	14	37.56	6.26	—	15.65	6.26
Charleston.....	49,999	31	13	12.92	16.15	—	6.46	3.23
Nashville.....	43,461	17	6	23.52	11.76	—	17.64	5.88
Lowell.....	59,485	34	17	44.10	11.76	2.94	38.22	—
Worcester.....	58,295	24	13	41.58	4.16	—	37.44	—
Cambridge.....	52,740	21	9	19.04	23.80	—	19.04	—
Fall River.....	49,006	22	12	50.00	13.64	—	36.36	9.09
Lawrence.....	39,178	19	10	36.82	10.52	5.26	26.30	5.26
Lynn.....	38,284	14	9	28.56	21.42	—	28.56	—
Springfield.....	33,340	11	2	27.27	9.09	—	9.09	9.09
Salem.....	27,598	8	2	—	25.25	—	—	—
New Bedford.....	26,875	10	5	10.00	—	—	10.00	—
Somerville.....	24,985	13	4	38.45	23.07	7.69	15.38	7.69
Holyoke.....	21,851	11	4	27.27	9.09	9.09	18.18	—
Chelsea.....	21,785	11	5	36.36	9.09	—	27.27	—
Taunton.....	21,213	11	2	18.18	18.18	—	—	9.09
Gloucester.....	19,329	7	5	14.28	—	—	—	—
Haverhill.....	18,475	5	3	60.00	20.00	—	40.00	—
Newton.....	16,995	8	3	—	—	—	—	—
Brockton.....	13,608	10	5	—	—	—	—	—
Newburyport.....	13,537	5	3	40.00	—	—	40.00	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	5	2	—	20.00	—	—	—
Twenty Massachusetts towns.....	140,630	63	28	40.82	9.42	—	37.68	3.14

Deaths reported 2756 (no report from Buffalo): under five years of age, 1276: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 851, diarrhoeal diseases 467, consumption 322, lung diseases 145, diphtheria and croup 123, typhoid fever 71, scarlet fever 52, malarial fevers 47, whooping-cough 33, small-pox 20, cerebro-spinal meningitis 19, measles eight, puerperal fever six, erysipelas five. From *scarlet fever*, Philadelphia 10, Baltimore nine, Chicago eight, Brooklyn six, New York five, Boston and St. Louis three each, Pittsburg and New Haven two each, Cincinnati, District of Columbia, Milwaukee, and Charleston one each. From *malarial fevers*, New Orleans 11, New York and St. Louis 10 each, Brooklyn five, Philadelphia and Baltimore four each, Chicago three. From *whooping-cough*, New York 10, Philadelphia six, Brooklyn and Chicago four each, Baltimore, Cincinnati, District of Columbia, and Pittsburg two each, Milwaukee one. From

small-pox, New Orleans 17, Philadelphia three. From *cerebro-spinal meningitis*, New York five, Chicago two, St. Louis, Baltimore, Cincinnati, Pittsburg, Milwaukee, Lowell, Worcester, Springfield, Somerville, Chelsea, Taunton, and Haverhill one each. From *measles*, New York three, New Haven two, Chicago, Baltimore, and Providence one each. From *puerperal fever*, Chicago and St. Louis two each, New Haven and Fall River one each. From *erysipelas*, Philadelphia two, St. Louis, Cincinnati, and New Orleans one each.

Two cases of small-pox were reported in St. Louis; typhoid fever 45, scarlet fever 15, diphtheria six, measles one in Boston; diphtheria five, and scarlet fever three in Milwaukee.

In 37 cities and towns of Massachusetts, with an estimated population of 1,127,693 (estimated population of the State 1,922,530), the total death-rate for the week was 22.96 against 25.57 and 25.72 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending August 18th the death-rate was 20.2. Deaths reported 3342: diarrhoea 343, acute diseases of the respiratory organs (London) 178, measles 117, scarlet fever 99, whooping-cough 58, fever 44, diphtheria 17, small-pox (Birmingham, and Liverpool three each, London and Sunderland two each, Wolverhampton one) 11. The death-rates ranged from 12.4 in Halifax to 27.2 in Liverpool; Bristol 15; Bradford 17.1; Birmingham 18.1; Brighton 18.3; London 19; Plymouth 20.2; Leicester 21.4; Leeds 21.6; Sheffield 22.1; Nottingham 23.3; Newcastle-on-Tyne 23.7; Manchester 26.1. In Edinburgh 19.7; Glasgow 22.3; Dublin 24.9.

For the week ending August 11th, in 169 German cities and towns, with an estimated population of 8,690,485, the death-rate was 24.3. Deaths reported 4058; under five years of age,

2208; consumption 498, diarrhoeal diseases 383, lung diseases 286, diphtheria and croup 127, typhoid fever 72, measles and röteln 64, scarlet fever 64, whooping-cough 40, puerperal fever 18. The death-rates ranged from 12.1 in Erfurt to 33.6 in Görlitz; Königsberg 23.9; Breslau 28.5; Munich 36.4; Dresden 23.8; Berlin 28.9; Leipzig 21.7; Hamburg 19.8; Cologne 24.5; Frankfurt a. M. 16; Strasburg 23.9.

For the week ending August 18th, in the Swiss towns, there were 32 deaths from consumption, diarrhoeal diseases 24, lung diseases 12, scarlet fever five, whooping-cough five, measles four, diphtheria and croup four, typhoid fever three. The death-rates were at Geneva 12.3, Zurich 16, Basle 15.9; Berne 26.

The meteorological record for the week ending September 1st, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
August— Sept., 1883.																			
Sun., 26	29.988	68	81	58	63	44	48	52	W	NW	NW	12	15	17	C	F	C	—	—
Mon., 27	30.213	62	71	50	62	28	54	48	W	N	NW	6	12	4	C	C	C	—	—
Tues., 28	30.193	59	66	50	74	63	75	71	NW	E	E	5	17	11	C	C	C	—	—
Wed., 29	29.952	57	66	48	57	54	69	60	N	N	NW	10	17	7	F	C	C	—	—
Thurs., 30	30.055	59	67	52	64	52	64	60	NW	E	NW	9	12	5	C	F	C	—	—
Fri., 31	30.179	62	74	55	60	73	84	72	O	SE	O	0	10	0	C	C	C	—	—
Sat., 1	30.197	61	68	55	84	87	93	88	S	E	NE	1	8	6	C	O	C	—	—
Means, the week.	30.111	61.2	81	48				64.4										—	—

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM AUGUST 31, 1883, TO SEPTEMBER 7, 1883.

SHUFELDT, ROBERT W., captain and assistant surgeon. Granted leave of absence for three months on surgeon's certificate of disability, with permission to leave the Department of the South. Paragraph 3, S. O. 204, A. G. O., September 5, 1883.

WAKEMAN, W. J., first lieutenant and assistant surgeon. Assigned to temporary duty at Fort Sidney, Nebraska. Paragraph 2, S. O. 92, Department of the Platte, August 28, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING SEPTEMBER 8, 1883.

DIEHL, OLIVER, passed assistant surgeon. Detached from the Naval Academy and ordered to the U. S. S. Quinnebaug, European Station, per steamer of the 15th inst.

ANDERSON, FRANK, passed assistant surgeon. Detached from the U. S. S. Quinnebaug, on reporting of his relief, and granted leave of absence for three months.

AMERICAN GYNECOLOGICAL SOCIETY.—The eighth annual meeting of the American Gynecological Society will be held in Philadelphia, at the hall of the College of Physicians, on Tuesday, Wednesday, and Thursday, September 18th, 19th, and 20th. Papers are expected to be read as follows: Superinvolution of the Uterus, by Dr. Joseph Taber Johnson, of Washington. The Importance of Cleanliness in Surgical Operations, by Dr. R. Stansbury Sutton, of Pittsburg, Penn. Some Points connected with the Subject of Dysmenorrhœa, by Dr. C. D. Palmer, of Cincinnati. An Unusual Form of Abdominal Tumor, three cases, by Dr. Thaddeus A. Reamy, of Cincinnati. Is Extirpation of the Cancerous Uterus a Justifiable Operation? by Dr. A. Reeves Jackson, of Chicago. A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College

(being the President's Address), by Dr. Gilman Kimball, of Lowell, Mass. The Management of Accidental Puncture and other Injuries of the Gravid Uterus as a Complication of Laparotomy, by Dr. Charles Carroll Lee, of New York. A New Method of Operating for Fistula in Ano, by Dr. Edward W. Jenks, of Chicago. Ergot: the Use and Abuse of this Dangerous Remedy, by Dr. George J. Engelmann, of St. Louis. Congenital Fissure of the Female Urethra, with Exstrophy of the Bladder, and Menstruation after Extirpation of the Ovaries, by Dr. Henry F. Campbell, of Augusta, Ga. Remarks on Chronic Abscess of the Pelvis, by Dr. William H. Byford, of Chicago. A Discussion on Death after Labor will be opened by Dr. Campbell.

RHODE ISLAND MEDICAL SOCIETY.—A quarterly meeting will be held in Masonic Hall, Newport, on Thursday, September 20, 1883, at 11.30 A. M. The proposed law pertaining to the abolition of the coroner system in Rhode Island and the substitution thereof of a system of medical examiners will be a prominent subject for discussion. **G. D. HERSET, Secretary.**

BOOKS AND PAMPHLETS RECEIVED.—The Principles and Practice of Surgery. Being a Treatise on Surgical Diseases and Injuries. By D. Hayes Agnew, M. D., LL. D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Profusely Illustrated. Vol. III. Philadelphia: J. B. Lippincott & Co. 1883.

Anatomy, Descriptive and Surgical. By Henry Gray, F. R. S., etc. With an Introduction on General Anatomy and Development. By T. Holmes, M. A. Cantab. The Drawings by H. V. Carter, M. D. Edited by T. Pickering Peck. A new American from the Tenth English Edition. To which is added Landmarks, Medical and Surgical, by Luther Holden, F. R. C. S., with Additions by William W. Keen, M. D. Philadelphia: Henry C. Lea's Son & Co. 1883.

Observations on the Management of Enteric Fever according to a Plan based upon the So-Called Specific Treatment. By James C. Wilson, M. D. Read before the College of Physicians of Philadelphia, January 3, 1883. (Reprint.)

The Topographical Relations of the Female Pelvic Organs. By Ambrose L. Ranney, A. M., M. D. With Twenty-Two Wood Cuts. New York: William Wood & Co. 1883.

Original Articles.

CONSUMPTION IN NEW ENGLAND.

BY E. P. HURD, M. D., NEWBURYPORT, MASS.

IV.

THE PHARMACEUTICAL TREATMENT.

THE medicinal treatment of phthisis is generally unsatisfactory, except so far as it is auxiliary to the hygienic. Common experience demonstrates this. Hygiene is of more value than drugs, and of the latter there are but a few on which we can rely. Reference to very many articles in back numbers of the Boston Medical and Surgical Journal, devoted to the treatment of this formidable disease, — and scarcely any disease has such a literature as phthisis, — only results in the conviction that while cod-liver oil, compounds of phosphorus, tonics and stimulants, with medicated inhalations, may be of material benefit associated with the hygienic measures insisted upon in a previous article of this series, alone they are of but little advantage as curative means, and that when the phthical invalid is obliged to remain at home and in-doors, doing little or nothing to avert the dire malady but take medicine, and await the daily visits of his physician, — hard as it is to confess it, it is true, — the patient is already past cure.

The following notes of two cases from my record book are a sufficient illustration of the disease in its gravest aspect. Observations such as these are of almost daily experience : —

PHTHISIS IN THE STAGE OF EXCAVATION; CAVERNOUS RESPIRATION AND PECTORILOQUY; AMPHORIC PERCUSSION RESONANCE; SLOW PROGRESSIVE EMACIATION; ALL TREATMENT INEFFICACIOUS.

Mary E., aged nineteen; Irish; domestic; father and mother healthy; no hereditary tuberculous antecedents. Two brothers and one sister have died of pneumonic phthisis. Patient was well and able to earn her living as domestic till about one year ago (May, 1882), when she "caught cold" and had a hæmorrhage. Since then there has been gradual emaciation and increasing debility, with evening attacks of fever and night sweats, harassing cough, and muco-purulent expectoration. The physical signs all point to extensive excavation at the apices of both lungs; in the left infra-clavicular region the percussion resonance is amphoric, and auscultation gives gurgling râles; on the right side near the axilla there is also hollow breathing and bubbling, with cracked-pot percussion sound.

The above description applies very nearly to the case of Mrs. B., of Madison Street, with the exception that the excavation signs are limited to the left side. Mrs. B. has been a consumptive for two years, and her disease has been apyretic; she is American by birth, and has suffered from overwork, abuse (her husband is a brutal sot), and deprivation of food, clothing, and fuel. There is, besides, an inherited tendency to tuberculosis, and (what Dr. H. I. Bowditch considers a most important factor in the ætiology of consumption) for several years after her marriage Mrs. B. lived in a marshy locality in a tenement shaded by trees; there was, moreover, always water in the cellar.²

¹ Continued from p. 484, vol. cviii.

² I can here only just allude to the valuable series of papers by Dr. H. I. Bowditch, in the Atlantic Monthly for 1869, on Consumption in America. The influence of sub-soil moisture in the genesis of this disease is there clearly shown. Not by any means the least

The question of treatment as applied to the case of these two patients is reduced to great simplicity. The impotence of therapeutics finds here a striking illustration. No remedy can save them; nothing can much prolong their existence. It is the reproach of our profession that the most cheering word in our power to pronounce to such patients is the promise of euthanasia.

Nutrients, hypophosphites, alcoholic stimulants, cod-liver oil, tonics are all ruled out; it is impossible to suggest anything under any of these heads that can be taken in quantities sufficient to arrest the disease or even produce any amelioration whatever. Both have pneumogastric irritability. They must be allowed to eat or drink just what they most crave, and nothing relieves the cough and systemic irritation but morphia. They are taking Magendie's solution, ten drops *pro re nata*.

The night sweats are for the most part persistent, despite the use of atropia, small doses of jaborandi, and other anhidrotic medicaments.

The sputum of both of these patients has been examined for tubercle bacilli, and the presence of these microphytes has been determined by the proper staining fluids, a one fifth objective being used.³

The medicinal treatment of phthisis comprehends (I.) the germicide treatment; (II.) the constitutional treatment; (III.) the symptom treatment.

(I.) Since the belief in the bacillus theory of phthisis has become prevalent, there has been a strong and predominant interest in the local antiseptic or germicide treatment of the disease. Internal medication directed against the supposed germ cause is, of course, not to be thought of. Nobody is foolish enough to suppose that the destructive parasitic agent of tuberculosis can be reached through the blood, especially since, as Pollock remarks,⁴ the same cause which has cut off a portion of the lung by strangling its vessels has also rendered it impervious to remedies approaching it through the circulation. To treat the lungs antiseptically, then, is to treat them by medicated inhalations. The various steam atomizers and spray apparatuses here find a place with pulverizations⁵ of creosote, carbolic acid, eucalyptus, etc. It being inconvenient to use a spray other means have been proposed for impregnating the air of respiration with antiseptic substances. The old-fashioned inhaling bottle has gone out of use,⁶ but the patient is sometimes made to in-

of Dr. Bowditch's valuable contributions to American medicine is his demonstration of the influence of damp, shady localities in favoring and fostering the tuberculous diathesis.

³ Since writing the above brief report both of these patients have died.

⁴ Lectures on Phthisis, London Lancet, 1883.

⁵ With regard to the remedial value of pulverizations in phthisis, in 1862 there was a long discussion before the Academy of Medicine, Paris, as to whether atomized liquids could penetrate the lungs or even the smaller bronchi. Gratiolet, Sales-Giron, and others claimed that this penetration was possible, others, as Fournié, Delore, maintained that pulverized liquids could not penetrate even the trachea. In cases where Delore caused atomizations of iodine and iodide of potassium to be respired he never found a trace of these medicaments in the urine of the patients who were the subjects of the experimentation. Fournié denies the penetration of pulverized liquids, but admits that of solids inhaled in the form of dust. Walderburg, while owning that a minute quantity of the atomized vapor reaches the air-passages, shows that the far greater part is lost in the pharynx and larynx, and that at the most, after a few minutes' inhalation, a few drops may penetrate the trachea and bronchi. Beaumetz, while summing up results, concludes that these atomizations do no good in phthisis or chronic bronchitis, while excellent in diseases of the pharynx. Dujardin-Beaumetz, *Leçons de Clinique Therapeutique*, t. ii., p. 526.

⁶ It is nevertheless true that in cases of phthisis with constant teasing cough and profuse muco-purulent expectoration the "old fashioned inhaler" is often of wonderful remedial efficacy, allayin

hale, and with advantage, the oil of pine made into a mucilage, and added in small quantities to hot water in an ordinary coffee pot. The formula and the process originated, I believe, with the author of the article on Consumption in Reynolds' System of Medicine. The naso-oral respirator is said to fulfill conditions which intermittent spraying or the inhalation of medicated steam can never do. Mackenzie medicates his respirator with a mixture of one part carbolic acid to three of creosote, and claims excellent results from the continuous wearing of the apparatus.¹ Respirators of charcoal, wool, cork, wire, and vulcanite have been described. Many of these are patented in England. The great objection, however, to respirators is their inconvenience and the difficulty which is experienced in getting patients to wear them continuously. Of all the antiseptics ever suggested for consumptives that of Cullimore in the *Medical Press and Circular* seems especially to commend itself. It is sulphurous acid vapor mingled with oil of pine, kaolin, oil of eucalyptus, or benzoic acid. These germicide substances are dropped on a bit of sponge in a wide-mouthed bottle, or inhaled from a pitcher of hot water. Full directions for the preparation and use of these bacillicide compounds are given in the number of *Braithwaite* for January, 1883.²

What benefit are we likely to derive from these medicated inhalations in phthisis? Is there positive clinical evidence in their favor?

Empirically they have long been used, in the belief that they favorably modify local inflammatory processes, disinfect the pulmonary secretions, allay irritation, and promote the cicatrization of cavities. Thirty or more years ago Drs. Minot, Pineo, Kneeland, and others reported in this journal successful results from the use of fumigations and inhalations in phthisis. It is probable that the inhalation treatment was more popular then than now. Kneeland especially insists on the importance of what he calls "the surgical treatment" of phthisis.³

It would be presumptuous skepticism to gainsay all the testimony in support of this direct medication. Some benefit is doubtless often derived; the cough is allayed, local congestions arrested, putrefaction of the bronchial secretions prevented, and respiration facilitated. There is, however, no evidence that inhalations, sprays, atomizations, or fumigations have any efficacy in destroying the micro-organisms⁴ whose mul-

irritation, and facilitating expectoration. No more useful formula was ever devised than the following, which was given to the profession in the *Boston Medical and Surgical Journal*, in 1857, by Dr. Edward Jenner Cox:—

R Ext. conii	3ij.
Ext. opii	3i.
Paregoric	3iss.
Bals. copaiba	3ss.
Spts. picis liquid	3ii.
Cherry-laurel water	3i. M.

Sig. Add a teaspoonful of the above to five tablespoonfuls of hot water in the inhaler, and inhale four or five times a day.

¹ Braith. Ret., part 86, page 95.

² No. 1 is as follows: R Ol. pini Sylvestris, ℥ lxxx., kaolin, gr. xx., acid sulphurosi, ad 3i. M. ft. inhalatio. Five to ten drops to be inhaled three times a day.

No. 2. R Ol. eucalyptus, ℥ lxxx., kaolin, ʒi., acid sulphurosi, 3i. M. ft. inhalatio.

No. 3. R Acid sulphurosi, 3ss., tinct. benz. co., 3ss. M. ft. inhalatio.

The essential ingredient in these inhalations is the vapor of sulphurous acid, the oils being used to disguise the odor, and render the acid vapor less irritating. The benzoin combination is the most generally useful.

³ Boston Medical and Surgical Journal, February 18, 1858.

⁴ Schueller, of Greifswald, and Rokitsansky, of Insbruck, claim

tiplication and whose ravages are supposed to be such important *secondary* factors in the disease. I say *secondary*, for I look upon the constitutional diathesis as of *primary* importance, as stated in No. 2 of this series. If the soil be not first fit for the bacillus it will not find a habitat there. If it be *fit*, there is no direct medication known to science which will prevent the development, growth, and multiplication of the parasite. It cannot, then, be too strongly urged that the hygienic and tonic medication constitutes the best germicide medication, and that pure, dry, bracing out-door air is the very best antiseptic.

(II.) The constitutional treatment of phthisis comprises all those remedial agents which assist nutrition and promote systemic vigor. Chief among these are cod-liver oil, the phosphates and hypophosphites, bitter tonics, alcohol, and arsenic. With regard to cod-liver oil, I have already referred to this incomparable nutritive medicament in the paper on hygienic treatment. With arsenic in phthisis I confess I have no favorable experience to report. Both arsenic and cod-liver oil undoubtedly increase the globular richness of the blood, as Cutler and Bradford have shown by their experimental researches.⁶ Beaumetz and Jaccoud place arsenic at the head of reconstituents, giving it in the form of granules of Dioscorides, Fowler's solution, or Bourboule water. The latter can be obtained in Boston, and is an excellent arsenical mineral water for phthisical patients.

As for cod-liver oil, we residents of the coast prefer the home-made preparation from the fresh livers of the codfish. I have never seen any foreign oil so sweet and so well borne as that which is made at our own port. Where the appetite is good, a tablespoonful of this oil is taken after each meal, and generally with no impairment of the digestion. If a tablespoonful cannot be borne, a less quantity may be taken. I have known a little porter or whiskey taken after the oil to cause it to be better assimilated. How much may daily be ingested to advantage? All that the stomach will tolerate, provided the appetite for other food be not destroyed in consequence. I have seen the best results from the oil when large quantities were taken, say four or five ounces a day. In whatever stage of the disease, where cod-liver oil is well supported, amelioration always attends its use. Unfortunately, however, in this stage of softening, and in febrile conditions, it is, as a rule, not borne.

Of the various emulsions in the market, I have had the best success with that of Phillips, which certainly contains the oil globules in a very minute state of division. I have seen this emulsion taken with benefit—and for a long time—by patients with delicate stomachs which revolted against the pure oil.

As regards the hypophosphites and phosphates in phthisis, much has been written, and there is much conflicting testimony. There is probably nothing specific about them. Alone they have never cured and never can cure consumption. They doubtless have an important subordinate place in the therapeutics of this

successful results in arresting the evolution of tuberculosis by inhalations of benzoate of soda. The latter used a five per cent. solution, causing fifty grammes of the salt daily to be inhaled, and reports fifteen cases. Klebs uses the benzoate both locally by inhalation and internally, giving frequent gramme doses. Guttman claims some relief from cough by this means, but thinks that the inhalation of plain water does as much good. Senator, Fritsche, Wolff, and others have given the benzoate treatment a fair trial, and pronounce it inefficacious, except possibly as a local palliative.

⁶ American Journal Medical Science, January, 1878.

disease, aiding nutrition, and possibly being appropriated, to some small extent, in supplying the waste of the organic phosphorus compounds.¹ Certain it is that they are given, and given largely, by almost every physician in the land, whether any definite results are seen from them or not. It is almost a matter of routine to prescribe somebody's syrup of the hypophosphites to every phthisical patient, and if the action of the mineral ingredient seems to be nil, the small quantity of strychnia in these syrups tends to keep up the appetite.

A favorite combination in the treatment of early phthisis, one that is sometimes well borne, and gives good results even in advanced stages, is the following:—

R Syrup lactophosphate lime, }
Cod-liver oil, } āā 3iv.
M. Dose. A dessertspoonful, to be taken frequently through the day.

One patient of mine, Mrs. L., of Merrill Street, took this preparation till almost the last period of her sickness, even when there were large excavations in the lungs and the appetite was entirely gone; it seemed to be nutritive and supporting, and the patient fancied that her cough was better under its use.

As for the iron preparations in phthisis, I think that common experience is against their use altogether, despite the anæmia which attends the disease. As a matter of fact they are not well borne, irritate the intestines, and aggravate any local lesion, in the lungs or elsewhere.

Glycerine is often prescribed as a tonic and nutrient, and taken in moderate doses it seems often to do good. Given with whiskey it is well supported, and relieves the cough. Alcoholic stimulants have an important place in the treatment of phthisis, especially the bitter ales, which I have repeatedly prescribed, and with marked advantage.

III. SYMPTOM TREATMENT. (a.) *The Cough.* The cough is an expression of the irritation of the respiratory passages. There are foreign bodies (tubercles) in the pulmonary parenchyma, there is a morbid secretion in the bronchi, the pulmonary and bronchial mucous membrane is in a state of erethism from hyperæmia. These three factors of cough need to be taken into account in instituting the treatment. The first and last factors are constant, the second is not so constant. The irritation (from whatever source) is referred to the pharyngeal plexus of nerves,—pharyngeal branches of the pneumogastric and spinal accessory, glosso-pharyngeal, and sympathetic. The intimate association, by communicating fibres and anastomoses, of this plexus with the nerves which innervate all parts of the respiratory apparatus, motor and sen-

sory, and the common origin of the principal of these nerves in the medulla oblongata, is a striking fact in connection with the phenomenon of cough.² The sensation of titillation which provokes cough is comparable to the sensation of thirst, both of which are the local expression of an imperative organic demand.

The cough of phthisis is the symptom the most persistent, the most annoying, the one for which the patient most imperatively demands relief. "O, if you could cure this cough I should be well!" is a frequent exclamation. The reply is sometimes forced upon us, "If you could be rid of the tubercles in your lungs, you would be rid of your cough." Here, then, is the important fact, that in order to cure the cough we must remove the cause of the cough, the tuberculous irritation, which is also provocative of the hyperæmia and the morbid secretion. For this we must depend on the hygienic régime and on tonic medication. The following case from my note-book is to the point:—

Patient, Eliza C., aged twenty-one; Irish; a servant girl in my family, 1867. Parents healthy people; one sister died of consumption in 1864. In February Eliza, previously in good health, took cold, and a severe cough set in, with fever and night sweats. The physical signs of a tuberculous deposit in the tops of both lungs were manifest. She persisted in performing her duties as house-maid. The cough was almost incessant, and for the most of the time dry; now and then it was attended by hæmorrhage. There was a marked vespertine febrile movement. This cough was a sore annoyance to the poor girl; she was unwilling to take cod-liver oil (which, in fact, was not supported), tonics did not suit, but she took quantities of squills, wild cherry bark, senega, in decoctions, medicated with paregoric, syrup of poppies, syrup of morphia, etc., which gave slight palliation. An occasional full dose of antimonial wine seemed to do the most good, particularly if followed by nausea; it promoted secretion, and thus diminished hyperæmia. I insisted on Eliza going to her home in the country, to rest from all work, to be much in the open air. She did so, and during the summer months recovered in great measure her flesh, strength, and appetite, the cough and night sweats for a time disappeared, only, however, to return with a re-awakening of the disease (which speedily became fatal) in the autumn.

The only means by which we can directly modify or alleviate the cough is by remedies which diminish hyperæmia and irritability. We may lessen the catarrhal inflammation by our counter-irritants and expectorants. As for counter-irritation, I have rarely seen much benefit in phthisis from the ordinary means,—painting with tincture of iodine, frictions with croton oil liniment till the appearance of the eruption, cantharidal vesication, etc.³ Theoretically, revulsion might be expected to do good, practically we are continually disappointed in it.

As for expectorants, the term is an arbitrary one, and may include a great variety of remedies. Whatever influence expectorants have on the respiratory apparatus is limited to the bronchial mucous membrane; here even they have a very restricted action, and, as Stillé observes, this action is addressed almost exclusively to that condition in which the bronchial secre-

¹ The phosphate of lime, as a nutrient and cell-producing agent of great power, was first brought to the notice of the profession by articles in the London Lancet for 1851. Dr. Stone, of New Orleans, made trials of this salt, and recommended it to American practitioners. It is well known that the salts of phosphoric acid are essential to the formation of azotic compounds, and in regard to the phosphate of lime it was shown that it increases the production of cells; the tribasic phosphates play an important part in the growth and development of plants, and are found in all seeds; in all chronic diseases of the human subject attended with emaciation, phosphates are excreted in excess. From theoretical considerations, then, these salts would seem to be indicated in phthisis.

The following combination, of which a wine-glass full may be taken after meals, is a favorite one in the Hôpital St. Antoine (Lectures on Phthisis, by D. Beaumetz): R Phosphate of soda, six grammes; phosphate of potash, three grammes; wine, two hundred grammes; syrup aurantii corticis, sixty grammes. M. Vide Ira Warren in Boston Medical and Surgical Journal, 1852, first vol., p. 201.

² Gueneau de Mussy, Clinique Medicale, t. i., p. 615, has dwelt largely on this anatomical and physiological consensus.

³ This is also the experience of Dr. J. Hughes Bennet. Vide article on Phthisis in Reynolds' System of Medicine.

tion is excessive and morbid.¹ Simple congestion is sometimes relieved by a diffusible stimulant, such as whiskey, which acts by exciting the whole vascular system, including that which is especially affected.² A favorite cough medicine is composed of whiskey and glycerine, which is prescribed in all stages and conditions of the disease. An ounce of glycerine is mixed with five or six ounces of whiskey, and taken freely during the day, in small quantities. The glycerine has special virtues of its own, being nutrient and tonic; it is a favorite remedy with Jaccoud, who regards it as scarcely inferior to cod-liver oil. It has also demulcent properties, soothing the dry and irritable throat. The "rye and rock" which is sold by our grocers and apothecaries is often made of inferior whiskey, and is not comparable to the compound with glycerine.

In cases where the bronchial secretion is excessive, remedies are indicated which help restore tone to the lax vessels, and which are directly stimulant to the morbid mucous membrane. Here medicinal inhalations are indicated (tar, balsams, turpentine, creosote, etc.), and certain remedies which are eliminated by the air passages, and have an alterative effect. Creosote, in doses of from half a drop to two drops with alcohol and some pectoral syrup, is a favorite medicament with foreign practitioners. I confess that I have never seen any marked benefit from its use. The simple or compound tincture of benzoin has been of much greater utility. Tar (as tar water, or syrup of tar), ammoniacum, copaiba, squills, and senega are much in use in these chronic stages with profuse secretion, and are all, probably, more or less useful. Where the secretion is thick and scanty, ipecacuanha and alkalies, especially chloride of ammonium, have certainly considerable efficacy. Where the cough is perfectly dry it is of no use to give expectorants; demulcents and sedatives are here indicated. And always throughout the disease we are obliged to resort to these latter medicaments. Demulcents probably aid principally if not entirely by their topical effect, while sedatives (the entire group of narcotics) and anæsthetics allay hyperæsthesia of the terminal sensory nerve filaments in the lungs, bronchi, and pharynx, and thus palliate the cough. The type of these medicines of course is opium, and sooner or later some form of this medicament becomes our chief reliance. Syrups of morphia or codeia (codeia, according to Bartholow, is far preferable, and is, *par excellence*, the sedative of the pneumogastric) are the most eligible forms in which to give the opiate. Momentary inhalations of chloroform and alcohol (one part to three) will sometimes relieve a stubborn cough, and a few drops of chloroform in water taken during a paroxysm gives palliation. When I was hospital interne in 1864 I used often to see Collis Brown's chlorodyne prescribed as an adjuvant to cough medicines, and I am now in the habit of ordering fifteen drops of Parke Davis & Co.'s *chloranodyne* where there is indication to soothe a harassing cough and procure sleep. (The formula of chloranodyne is well known to the profession.)

I do not think that there is in wild cherry bark enough hydrocyanic acid to afford any perceptible sedation to the irritable broncho-pulmonary mucous membrane (at least in any ordinary dose).

(b) *The Night Sweats.* The pathogeny of the night sweats of phthisis is ill understood. Profuse nocturnal

sweating is always an index of debility, but it does not accompany all states of debility; it bears, however, a marked relation to exhausted conditions of the respiratory system. When the respiratory centre is exhausted the excretory function of the sudoriparous glands is exalted, the skin being to a certain extent vicarious with the lungs. In disease of the lungs with limitation of the field of hæmatosis, there is increased elimination by the skin, and when, as in deep sleep, the pulmonary excretion is at its minimum, hidrosis is at its maximum, the vaso-secretory nerves being stimulated to action by an excess of carbonic acid in the blood.³

The night sweats of phthisis are, however, neither physiological nor salutary. If it were proper to credit nature with any good intention, the fact is patent that elimination is soon overdone, the blood is rapidly impoverished of its water and salts, chlorides, phosphates, and sulphates. It is, moreover, susceptible of daily proof that arrest of these sweats is attended with benefit to the patient; appetite and strength at once improve. So marked is this gain that Fothergill considers that the most important indication in the treatment of early phthisis is to stop the night sweats.

Of all the medicinal means for checking hidrosis in phthisis probably the most effectual is belladonna or its alkaloid, atropia. Atropia is more reliable than belladonna, although one half grain of the extract of the latter, or ten drops of the tincture, at bed-time, is often efficacious. Atropia is a special stimulant to the respiratory centre, and proves beneficial in exhausted states of that centre, and besides making the necessity for hidrosis less it locks up the sudoriparous glands, being an arrester of secretion.

A convenient way to administer atropine for night sweats is to rub up a grain with one hundred grains of white sugar, and divide into one hundred powders. Of these one may be given at five o'clock P. M., and another about bed-time. This will generally arrest the sweats. One or two drops may be given at bed-time of the British solution, enough being administered to obtain the physiological effects of the drug, among the most noticeable of which is dryness of the throat. J. Milner Fothergill has an excellent pill which alleviates both cough and night sweats. It consists of one fourth grain morphia, one fortieth grain atropia, one grain of capsicum, and three grains of pil. aloes and myrrh.

Other means for arresting the sweats are in vogue, such as sponging the patient all over with cold vinegar (to which some add capsicum); the use of a powder, which is dusted over the whole body at bed-time, consisting of salicylic acid, one part to six or eight of lycopodium and starch;⁴ sponging with hot water at night; causing the patient to be aroused before the time of sweating, giving him a light lunch, and bathing hands and face; two to five grains of quinine at bed-time; a pill of oxide of zinc three times a day, etc. Dr. Murrell has recently introduced picROTOXINE to the profession as a valuable anhidrotic, one gramme to 240 grammes water; dose, one to four minims three times a day, last dose at bed-time. He claims remarkable success with this remedy. It does not make the skin too dry, while atropine often seems to parch it up. M. Charteris proposes hypophosphite of lime, of which

¹ Therapeutics and Materia Medica, vol. ii., p. 493.

² Ibid.

³ This is substantially Fothergill's explanation. Vide Braithwaite's Ret., part 78, page 74.

⁴ New York Medical Record, vol. xvii., p. 287.

he recommends three grains three times a day. He claims excellent results. Lastly, we have seen small doses of *jaborandi* recommended on the principle of *similia similibus*.

In my own experience the atropine treatment with night feeding and sponging has been the most successful.

(c.) *The Hæmoptysis.* The hæmoptysis in phthisis results either from congestion around a tuberculous deposit or from the rupture of a blood-vessel or (according to Damaschino) small aneurisms in a cavity. The most valuable means for combating this always alarming accident are subcutaneous injections of ergotine, two grammes to thirty grammes of water. Squibb's fluid extract of ergot may be given in doses of ten drops every hour, or even every half hour. Dobell's solution, which consists of an ounce of compound infusion of roses, to which is added twenty drops fluid extract of ergot, twenty of tincture of digitalis, ten grains gallic acid, fifty of sulphate of magnesia, and ten drops dilute sulphuric acid, — the whole to be taken at one dose, and repeated every three hours till the hæmorrhage ceases, — is a deservedly popular prescription, combining the ordinary hæmostatic remedies with a cardiac sedative, digitalis.

(d.) The diarrhœa of phthisis is often very stubborn, depending as it does generally on intestinal tuberculosis and ulceration. It requires a rigid dietary regimen of milk, flour gruel, aided, it may be, by pancreatic emulsion, raw meat, etc., with opium in sufficient doses. The best results, in my opinion, attend the combination of opium with bismuth, one grain of the former to ten, or even twenty, of the latter.

(e.) The fever of phthisis, which is generally of a suppurative, remittent, or intermittent type, is little amenable to aconite, veratrum, and other popular febrifuge medicaments. If I may again refer to personal experience, I would say that I have had no success in treating this fever with the large doses of quinine and salicylic acid which have been advised, while I have certainly been more successful with cold sponging and the administration of mineral acids. The euechlorine mixture, recommended by Watson, has at times been of marked service.

A CASE OF SUPPURATIVE HEPATITIS DUE TO A PIN IN THE VERMIFORM APPENDIX.

BY M. D. CHURCH, M. D.

ON Saturday, A. M., November 11, 1882, I was called to see E. K., an unusually bright, active child of nine years, who on the day previous returned from school complaining of lassitude and great weakness, which came over her during the afternoon while in school. In reply to her mother's inquiry she said she felt no pain in any part; some household remedies were administered during the evening and the child was placed in bed, where she passed a restless night. Upon inquiry I learned that the child had always been healthy, although she looked delicate; family history good. No history of an accident or injury could be obtained. Her mother said her appetite was always precarious, and she thought declining during the last few days. Bowels usually inclined to constipation. Examination showed a girl rather tall for one of her years, with delicate skin and features; cutaneous blood-vessels remarkably prominent over the entire body, es-

pecially the trunk. Percussion and auscultation of the chest and abdomen revealed nothing abnormal; deep pressure in either hypochondrium showed no tenderness, tumor, or swelling. Examination of the urine on the following day showed the kidneys to be in a healthy condition. At the time of visit the pulse was 90, respiration normal, temperature 99° F. From the 11th to the 17th inst., the child insisted upon being dressed and lying upon the lounge during the day, and her general condition remained about the same as at my first visit until the 18th, when she had (as her mother described to me) a "nervous spell," during which she was very restless and thirsty; cheeks became red, although the skin was very harsh and dry, and after an hour slightly moist from perspiration, when she appeared as on days previous. This was repeated on the day following at nearly the same hour. On the 20th she was suddenly seized with a "shivering spell," and complained of feeling cold, accompanied with some nausea and occasional vomiting. The chilly sensation soon passed off, and pallor was replaced by flushing and suffusion of the face. These phenomena having occurred in the P. M. after my visit in the morning, I changed my hour of visitation, and on the following day (November 21st, 4.30 P. M.) found the patient in profound chill, shivering, nauseated, and vomiting, vomitus consisting of ingested fluids and bile. The chill lasted about forty-five minutes, and was quickly followed by flushed face, quickened pulse, thirst, and rise in temperature. Temperature at height of fever 103° F.; pulse 112; respiration 28. Ordered quinine in cachet form, two and a half grains each, to be given till roaring in the ears was complained of. The patient said she had no pain whatever. On the following day I found her comfortable, and she said she felt much better; ordered the quinine continued in sufficient quantity to produce slight cinchonism for at least four hours previous to time of expected chill. But the patient strongly objecting, the drug was not given as directed, and that night at nine P. M. a chill occurred, accompanied by retching and vomiting. Insisting upon the regular exhibition of the drug, there were no chills or chilly sensations during the succeeding four days, although the pulse remained accelerated 100.

On the 27th she complained of headache, and the quinine was discontinued. Patient seemed quite bright and cheerful, and at time of visit said she felt much better. Percussion and auscultation of the chest gave negative results; no pain or tenderness in any part was complained of, although deep digital pressure was made in both hypochondria, and percussion and pressure over the liver and spleen. Percussion over the liver seemed to indicate a slight increase in the area of hepatic dullness upwards and towards the median line of the body, also slight enlargement of the spleen.

On the 28th patient had another chill, followed by fever, with nausea and vomiting. There being such a repugnance to the quinine when administered by the mouth, it was combined with nutrient enemata, which became imperative in consequence of the weakness and irritability of the stomach.

On the 29th, after a restless night, patient had a chill at five o'clock A. M., when nausea, retching, and vomiting became severe; yet she said she had no pain. Being called at nine A. M., I ordered for the vomiting sodii bicarb. 10.00, oil absinthii .20, aquæ 100.00, teaspoonful every hour. At four P. M. found the patient quite comfortable; had retained nutrient enemata, also

a small quantity of brandy and beef-juice. The fever following the chill in the A. M. reached the highest point observed during her illness, 105.8° F. Directions were given to continue the quinine if the stomach would permit, which was begun at the time of my visit in the P. M.

November 30th, five P. M. Pulse 100; respiration and temperature normal. Found the patient sweating gently; said she felt no pain or tenderness while being examined; had taken one grain of quinine during the day.

On the following morning, December 1st, I learned that a chill came on at ten P. M. the day previous, between which and the appearance of fever there was an interval of over half an hour, during which the patient slept quite soundly, when a rise of temperature commenced which did not exceed 102° F., and was short in duration.

On the 2d of December she complained of severe pain in the right hip and thigh of a lancinating character, for which warm applications were prescribed, and which soon disappeared. Examination of the liver and spleen showed no thickened margin or perceptible tumor or fluctuation, but area of dullness over both organs seemed increased, so that a line of dullness extended almost across the body. Dr. S. E. Wyman being called in consultation, remarked that there was a continuous area of dullness across the body, whether due to enlargement of the liver entirely, or both spleen and liver, he would not say positively. During the examination deep digital pressure was made in both hypochondriac regions, and pressure and percussion over the liver, but no tumor or tenderness was found, neither was pain excited; no râles or dullness were found about the lungs.

On the following day, December 2d, while vomiting during a chill, the patient complained of epigastric pain, which was felt only while vomiting.

December 3d. Considerable cough, while the chilly sensation was complained of, and the patient wanted to lie upon the left side; complete anorexia; marked emaciation; mind perfectly clear. Pulse 98; respiration and temperature normal. Nutrient enemata rejected; great weakness complained of, but no pain.

December 4th. Examination of urine showed diminished specific gravity (1013), greatly diminished chlorides, increased coloring matter, mere trace of albumen, but no casts. During the night previous there had been two involuntary diarrhoeal discharges.

December 6th. A chill came on at six A. M., when nausea and vomiting became persistent; much pain was complained of while vomiting, and referred to the stomach. The chill was followed by rise of temperature which terminated in profuse perspiration.

Dr. J. T. G. Nichols saw the patient in consultation on this day, and after a careful examination said that he would not assert positively that there was splenic enlargement, although the patient complained of tenderness whenever pressure or percussion was made over this organ. The diagnosis that seemed most probable was pyæmia from some internal cause, probably a pylo-phlebitis. The extreme irritability of the stomach precluded the use of any medicines except such as could be administered in form of enemata. Soda-water and champagne in teaspoonful doses were administered at intervals of half an hour, and for twenty-four hours, immediately returned.

December 7th. Patient had a chill at one P. M.,

short in duration, and quickly followed by fever. Pulse at time of visit, five P. M., 112; respiration 32; temperature 104.5° F. Examination of urine showed diminished quantity, specific gravity, chlorides and phosphates; large trace of albumen and bile coloring matter.

On the 9th the amount of urine excreted greatly diminished (480 grammes) in twenty-four hours, was high colored, and contained considerable bile. The patient seemed much weaker, and had a peculiar pinched and emaciated look. The conjunctival mucous membrane and scleral coat slightly stained with bile pigment.

December 10th. Pulse 104; respiration 28; temperature 100° F. The patient complained of itching over the entire body; skin was dry and markedly icteric; tenderness manifest over the region of the liver and spleen on palpation or percussion, but no pain.

December 12th. Pulse 100; respiration 24; temperature normal; skin deep yellow in color; tongue thickly covered with a dirty brown incrustation; area of hepatic dullness much extended; pressure or percussion over the region of the gall-bladder causes pain; no dyspnoea. Chest examination showed the heart and lungs to be in a healthy condition. Examination of the urine at this stage showed the amount of albumen to be one fourth per cent., also to contain hyaline, granular, and epithelial casts, and much degenerated renal epithelial cells, all of which were deeply bile-stained. The amount of urine passed in twenty-four hours 180 grammes. One normal dejection during the day.

December 13th, thirty-third day of illness. Pulse 120; respiration 32; temperature normal. The patient passed a restless night; nutrient enemata retained. The amount of urine passed in twelve hours 120 grammes; the urine thick, and contains large amount of bile; bits of cloth or paper dipped in it were deeply stained with bile pigment. During the day there were two dejections deeply stained with bile coloring matter. Tenderness over the gall-bladder more marked, but no tumor or fluctuation discernible; no pain except when pressure is made over the liver.

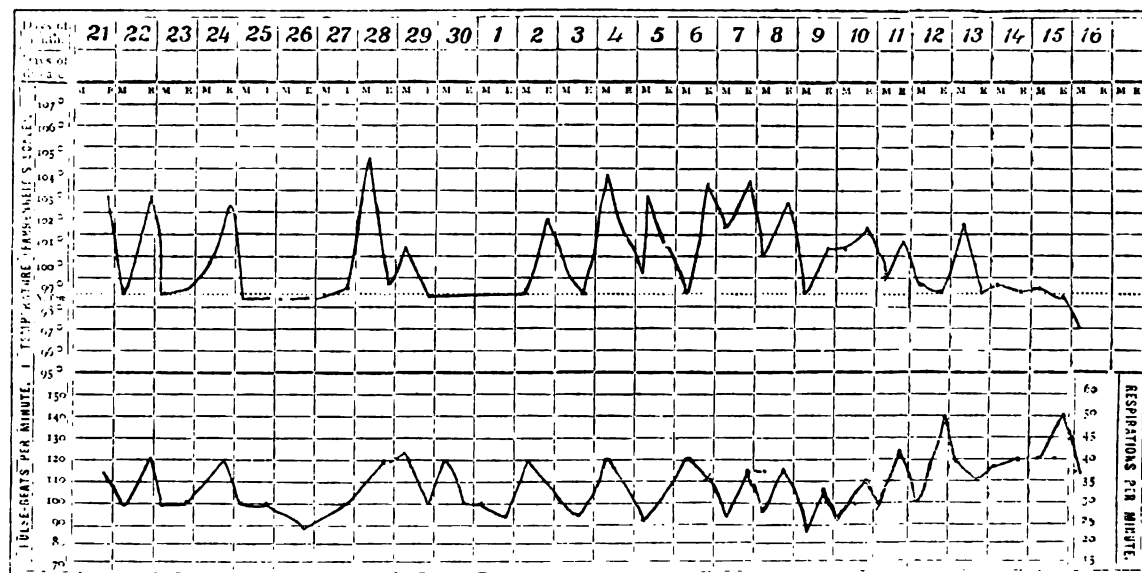
December 14th, 9.30 A. M. Pulse 112; respiration 32; temperature normal. Patient vomited once during the night; vesical tenesmus marked; amount of urine passed in twelve hours ninety grammes; mind clear; no pain except on pressure; auscultation shows diminished vesicular murmur at the apex of the right lung, also over upper lobe of the left lung in front, with fine mucus râles; the patient complained of cold feet and limbs; assumed the supine position, with limbs sharply flexed on the body; the teeth covered with sordes; the bright yellow color of the skin had given place to a greenish tinge. Five P. M. No nausea or vomiting during the day; the amount of urine passed since the morning visit 150 grammes, lighter in color, and the amount of bile, as indicated by the color test, diminished; the countenance was more composed; mind clear; no cough or pain; pulse 120; respiration 32; temperature normal.

December 15th, ten A. M. Pulse 116; respiration 32; temperature 99° F. Patient quite restless till midnight; slight nausea and vomiting in the early morning preceded by a feeling of coldness; amount of urine during last twelve hours 150 grammes; the amount of albumen increased nearly one half per cent.; nutrient enemata during the night and morning returned; the greenish tinge of the countenance had

nearly disappeared; color of the skin a bright yellow; area of dullness and tenderness over the liver increased, but no tumor or fluctuation could be made out; no pain experienced except when pressure was made or the patient turned upon the right side; patient's mind clear, and she said she knew she could not recover. Half past eight P. M., same day, was called, and found the patient breathing rapidly, and much excited and talkative; pulse 116; respiration 60; temperature 99° F.; pulse very feeble, and respiration labored. When asked if she was suffering pain, she said no; neither could I discern any obstruction to

respiration. The patient asked for some cake and milk, of which she partook, and said she felt better, and was ready and willing to die.

December 16th, 9.30. Pulse 112; respiration 36; temperature 97° F.; patient talked nearly all night; mind perfectly clear; voice quite strong at the time of my visit; she said she had no pain except when pressure was made over the liver; abdomen quite tympanitic. The patient continued in earnest conversation with her friends until one o'clock, when she became comatose, and expired at 1.30 P. M., after thirty-six days of illness.



Autopsy performed and reported by Dr. S. E. Wyman, December 17th, twenty-two hours after death.

Body markedly icteric. Emaciation marked. Rigor mortis moderate. No external wounds. Panniculus adiposus reduced to minimum. On opening the abdomen an enlarged liver was seen extending nearly to the umbilicus. No adhesions of the peritonæum, but a slight amount of clear, colorless serum in the pelvis.

Heart normal in size, with, perhaps, a little less firmness of the muscular tissue. Valves intact. Recent clot in both ventricles, larger in the right.

Lungs were not adherent; both crepitate; everywhere discolored by bile pigment, and made to resemble wash-leather in color. At the extreme edge of the lower lobe of the right lung, on its anterior surface, were two small spots of consolidation, dark red in color, hard to the feel, and which on section showed no evidence of containing air or pus. In the upper part of the upper lobe of the left lung was a larger spot of hardened tissue, from which, on section, pus flowed. The lung tissue surrounding this spot contained more blood than usual.

Spleen normal in size and consistency.

Kidneys not enlarged. On section the cortical portion projected over the edge of the cut. The cut surface had a peculiar wash-leather color, and was deeply bile-stained. The cortical portion slightly swollen, suggesting parenchymatous inflammation. Capsule stripped readily, leaving a perfectly smooth surface.

The stomach contained about six ounces of greenish fluid, with a perfectly healthy condition of the lining membrane.

As soon as the abdominal cavity was opened the liver was seen to occupy more than the usual space in the lateral and downward directions. On the top of the anterior surface of the right lobe there was an area, measuring three inches in diameter, over which the general color was much darker than the surrounding liver tissue, containing irregularly-shaped, yellow-looking spots. This area was elevated above the surrounding parts, gradually rising from the edges towards the centre, and markedly fluctuating on pressure. There was no inflammation of the peritonæum over the liver. On turning up the organ *in situ* there was seen a second swelling on its under surface, in the lobus quadratus, just inside of (towards the median line of the body) the gall-bladder. This swelling was much more circumscribed (one inch diameter), with greater elevation. It was resting upon the duodenum (whose surface was stained a deep brown at the point of contact), and from it pus flowed upon the gentlest manipulation. After the removal of the intestines the liver was taken out. Weight two pounds, one ounce; measured eight inches in its transverse, and six and one half inches in its longitudinal diameter.

The gall-bladder was normal in appearance, and contained some bile. Duct pervious.

On section the liver was deeply stained with bile; acini quite distinct; general cut surface granular. On cutting through the larger abscess it was found that there was no distinct membrane inclosing it, but that in its immediate neighborhood there was a zone of very much congested, darker hepatic tissue. The interior of the abscess was found to consist of several

subdivisions, resembling in coarse structure the microscopic appearance of carcinoma, namely, alveola; spaces filled with pure, creamy pus (nowhere bile-stained), and the walls of the alveoli made up of trabeculae of tough, dense, fibrous tissue. The alveoli varied in size and shape. The same condition was found in the smaller abscess, but less marked. No other abscesses were found in the liver. During the examination pus welled out of the portal vein. On careful examination of the portal vein no thrombus or embolus was found; the walls of the vein were smooth, shining, and not injected.

The intestines were removed from below upwards. The appendix vermiformis was firmly bound down to the peritonæum of the iliac fossa, but no evidences of inflammation were seen. As soon as the appendix was touched it was evident that it contained some solid body, suggesting a pin, needle, or fish bone. Great care was exercised in removing the intestines, and after removal the appendix was opened by using a pair of blunt-pointed scissors. There was no perforation of the appendix, which very closely resembled a miniature glove-finger, with quite a blunt distal termination. After opening the appendix for a short distance some difficulty was experienced in advancing the points of the scissors, and some fluid, which was thick and yellow, flowed out. Pus? When laid open to its blind extremity there was found a pin lying longitudinally, with its point towards the cæcum. The pin was much corroded, its point invaginated beneath the mucous membrane for quite one half of its length. The mucous membrane of the appendix was markedly thickened, its surface elevated above the surrounding parts, with a very dark color in that portion in immediate contact with the pin; there were also many minute dark spots dotted here and there throughout the rest of the mucous membrane. There were no evidences of thrombosis in any of the mesenteric veins, which were somewhat more injected than normal. Mesenteric glands plainly visible, but not enlarged. The pelvic organs were not removed. The bladder was seen considerably distended, filling up the greater part of the pelvic cavity.

Head not examined.

Among the interstitial inflammatory affections of the liver, Orth says "that purulent inflammation appearing in the form of abscesses is rare." When observed in temperate climates it is most frequently dependent upon ulceration and perforation of the vermiform appendix (typhlitis), or purulent inflammation in surrounding tissues (perityphlitis). So far as I am aware there is but one recorded observation where hepatic abscess arose from a purely mechanical irritative cause existing in the appendix cæci, which was the seat of neither inflammation, ulceration, nor perforation. In the Transactions of the Pathological Society of London, Payne reports a case in St. Mary's Hospital where a woman died from what had been diagnosed as "pyæmia of internal origin." At the autopsy a black pin was found in the appendix vermiformis, its point projecting one fourth of an inch into the cæcum; its shaft was surrounded by fecal concretions. The mucous membrane was considerably thickened, otherwise it presented a normal appearance. There was no enlargement or ulceration of the mesenteric glands, neither were there coagula (thrombi) found in the mesenteric veins; in fact, no lesions could be distinguished at any spot between the apparent starting-point of dis-

ease (the appendix) and the liver, where a single large abscess was found, surrounded by softened and disintegrating hepatic tissue. So far as a post-mortem examination could discover, there was no inflammation of the portal veins. While it was natural to suppose that some relation existed between the presence of a foreign body in such a situation and abscess of the liver, so far as the report shows, there was no attempt either to disprove the accuracy of the diagnosis or trace the ætiology of the disease in the liver farther than what simple inspection might reveal. However, in justice to the observer it should be remembered that pathological-histology was not so thoroughly taught or practiced at that time (1869) as at the present day.

It is to this branch of science that we must look for aid if we would understand or observe the relation of morbid cause to effect. In many cases the mode and place of origin of pathological processes is difficult to discover, even when studied and examined in the light of a careful and painstaking post-mortem investigation. As in Payne's case, the unaided eye of the examiner could only discern diseased processes at their extreme points of origin and greatest manifestation, while the intermediate steps in their development were unknown, or at the best undiscovered. Pathologists affirm that hepatic abscess is most frequently the result of embolism or some form of thrombosis, originating in vessels distributed to the cæcum, ascending and transverse portions of the colon; although Ziemssen says that "abscess of the liver may exist when a thrombus in the primary or an embolus in the secondary pathological condition cannot be found, because they have been completely destroyed."

Pathological science teaches that thrombi forming in vessels with healthy walls are benignant, but may become malignant in character by absorbing the product of inflammatory disease within the vessel wall or circumjacent parts (as in perityphlitic abscess, etc.); that thrombi possess the power of originating disease in distant organs to which they have been transported in the blood stream, of a benignant or malignant character, according as they act in a purely mechanical manner, by arresting the blood flow to parts beyond, or in a septic manner, by exciting within the vessel where they are lodged true inflammation (phlebitis).

It further teaches that in consequence of the intimate and peculiar anatomical relation existing between the portal (or interlobular) and the hepatic (or intralobular) veins there may be a transference of inflammatory processes from the former to the latter, whereby new foci of infection are established for a farther dissemination of disease throughout the pulmonary circuit.

Pathological histology has demonstrated that hepatic abscesses of pyæmic origin are small, multiple, and disseminated; that the liver cells are the parts first affected, either by atrophy, infiltration, or granular disintegration, while other parts of the organ may remain comparatively normal or become secondarily affected. Single large purulent deposits are rarely if ever found in the liver associated with pyæmia, while, on the other hand, they are frequently the result of disease originating within a vessel. In pylo-phlebitis, the wall of the affected vessel is greatly thickened from proliferation of the connective tissue cells, so that the true liver cells lose their hexagonal contour from pressure, and assume irregular shapes, but remain unaffected except at the point of abscess formation, where they are com-

pletely destroyed. When the hepatic vessels are affected by inflammatory disease transmitted from the portal, their walls are thickened, the lumen greatly increased, and the vessels are filled with thrombi in different stages of disintegration, or abundance of pus corpuscles, which being mingled with the blood of the inferior vena cava, are poured into the right side of the heart, from thence to the lungs, where they may give rise to infarctions, embolic abscess, or true embolic pneumonia.

The opportunity to examine a more unique case than the present is rarely presented. The microscopic examination of various organs afforded an admirable opportunity to verify the teachings of pathology, and observe many of the intermediate steps in the development of the fatal disease.

Sections from the liver in the vicinity of the abscess and through the abscess wall showed the liver cells unaffected but greatly distorted, from pressure, so much so as to appear like columnar epithelium; the walls of the portal and hepatic veins were greatly thickened, and the calibre of the latter much increased, while both systems of vessels were filled with granular detritus, pus corpuscles, and thrombi in various stages of disintegration. Sections from the affected portions of the lung showed the alveoli filled with granular matter, while the vessels containing the emboli were apparently unaffected. Thrombi were found in the vessels leading to the affected portions, but without the radius of the diseased area. Examination of the kidney showed casts in abundance within the uriniferous tubules, but few perceptible changes in the cortex or interstitial tissue.

The case seems, from the pathological conditions observed, to have been one of phlebitic rather than of pyæmic origin. It is of interest to determine the exact spot where inflammation originated, whether at the point where the pin was found or within the liver. It certainly would seem to be a just conclusion that it arose at the point of greatest mechanical irritation, where thrombi were formed from pressure exerted by the swollen mucous membrane, and later rendered septic by the absorption of pus. Yet it certainly would seem reasonable to suppose that the parts about the appendix would have shown greater evidence of inflammation. The disturbance in the kidneys, doubtless, was of an irritative character, from the passage of the biliary salts producing congestion.

The case is particularly instructive in its clinical features, as showing how grave and fatal a disease may exist within the liver and other organs unattended by pain or soreness, the two earliest symptoms thought to be of greatest diagnostic value. Also as showing how a purely local irritative cause may originate disease of a benignant character which later may become malignant. It is noticeable that in the present case there were no inflammatory processes in the neighborhood of the cæcum which could occasion any severe symptoms during life, hence differing from the class of cases described as typhilitis or perityphilitis; that there was no perforation or peritonitis; that in the absence of local symptoms the diagnosis could not at the best have reached a greater precision than to infer the existence of some pyæmic or phlebitic process from some internal cause. It is therefore probable that other cases described as pyæmic of internal origin, and unconfirmed by post-mortem and microscopic examination, may have a similar origin.

N. B. It was not known that the child had swallowed a pin until it was shown to the parents after autopsy, when her sister said she remembered when it happened, but had quite forgotten the occurrence. According to the latter's statement the pin was swallowed about the middle of August, and the fatal illness began November 10, 1882.

A PHYSIOLOGICAL METHOD OF TREATING CARIES OF THE DORSAL VERTEBRÆ.

BY CHARLES F. STILLMAN, M. S., M. D., NEW YORK,
Orthopædic Surgeon to the New York Infant Asylum.

CARIES of the vertebræ is recognized as occurring most frequently in the dorsal region,¹ and it is also considered the most difficult to cure in this region² by any of the methods in vogue.

If simple *fixation* braces be used, such as Davis's, Washburn's, Knight's, or Shaffer's, there is not sufficient backward traction produced to relieve the diseased bodies of the vertebræ from weight, nor is there forward pressure produced about the seat of the disease to combat deformity.

If *symmetrical extension* is desired, and the plaster jacket is used for this purpose, the jury must will be required in addition, if the disease be in the middle or upper dorsal region, and the apparatus is cumbersome and not adjustable.

Wyeth's or Roberts' *local extension* jackets are not available unless provided with a head rest, and are then too heavy and unmanageable for nice practice.³

Backward traction is the most convenient and useful plan of treatment which we have at command. This aims to curve the spine backward so as to relieve the bodies of the vertebræ from the superincumbent weight which is thereby transferred to the posterior processes.

There are several methods of effecting this: the use of the *plaster jacket* applied while the patient lies face downward in a hammock (Davy), or upon two bands, — pelvic and thoracic — (Halsted), constituting *one*; the *fixation braces* of Mr. E. J. Chance,⁴ of London, which is provided with pads opposite the seat of disease, from which the upper part of the metal frame is bent backward at an angle, being a *second* method; while the use of the double knuckle joint *lever brace* of Dr. C. F. Taylor,⁵ of New York, constitutes a *third*. The latter not only curves the spine backward, but by its forward leverage upon the transverse processes of the diseased vertebræ tends to reduce or prevent the deformity.

It is, however, very heavy, since its peculiar construction necessitates great strength of material, as it is so arranged as to bring an unnecessarily severe pressure upon the spine at the seat of disease, leading in some cases to excoriation.⁶ These systems of treatment have, with few exceptions, been before the profession for a sufficiently long period, and have been employed with varying degrees of success; but, on the

¹ Pott's Disease. By Newton M. Shaffer, M. D. G. P. Putnam's Sons. 1879. Page 45.

² Ibid., page 51.

³ For an illustrated description of these various methods see American Journal of Obstetrics, June, July, August, and September, 1883.

⁴ The Surgery of Deformities. By E. Noble Smith. London. Smith, Elder & Co. 1882. Pages 224-226.

⁵ Transactions of the New York State Medical Society, 1863.

⁶ Orthopædic Surgery and Diseases of Joints. By Lewis A. Sayre. New York. D. Appleton & Co. 1883. Page 483.

whole, the mechanical treatment of Pott's disease is considered to be in an unsettled and unsatisfactory condition.

In the consideration of the mechanical problem presented by this disease there are two requisites which must enter for successful treatment:—

- (1.) Arrest of the disease.
- (2.) Improvement of the deformity.

And as a result of research in this direction a new form of lever brace is proposed which is adapted to meet these requirements.

Its objects are (1) to produce extension of the bodies of the vertebræ by backward traction, thus aiming at the arrest of the disease; and (2) to exert forward pressure at the seat of deformity, thus tending to its improvement or obliteration. These objects are also embraced by the instrument of Dr. Taylor, but in the brace to be described they are attained by a different construction and by a more economical application of forces which entails special advantages.

To properly understand the principle upon which the new brace is constructed we take a patient with Pott's disease, having a well-defined knuckle, and lay him upon the back on a table, the edge of which comes to the apex of its deformity, as in Fig. 1, his



FIG. 1. Extension of bodies of vertebræ by backward traction.

head and shoulders being allowed to fall downward. This is effected by the law of gravitation, and the weight of the part of the body above the site of the disease is thus utilized to produce an *extension* of the bodies of the spine at the knuckle. The edge of the table (which, of course, should be so padded as to bring the pressure upon the transverse, and not the spinous, processes) presses upon the deformity to such an extent as to improve the form of the knuckle, and this partially or entirely disappears until the erect position is again assumed, unless the consolidation process has proceeded to such an extent as to render effort in this direction futile. See Fig. 1.

We have thus by this position produced the two mechanical effects upon the spine which we have already stated were necessary to the successful treatment of the disease, and if this position could be kept up indefinitely there would be a rapid improvement; but it is not feasible to keep the patient in this position, and we are therefore led to embody in a brace the forces which will produce and sustain this condition of the spine in whatever position the body may assume.

To do this we construct the brace in two parts,—one to represent the table and the other the backward traction power,—which in the position just shown is exerted by the attraction of gravitation.

The table part of the brace consists of a firm pelvic band, from which strong padded strips pass upward on either side of the median line to the seat of disease. See Fig. 2. The backward traction part consists of a back frame, secured on the pelvic girth by a ratchet, which admits of its adjustment at any angle with the table part of the brace, and thus regulates the degree

of traction power, which may by it be varied from a simple upright support to a powerful lever, depending only on the angle at which this back frame is thrown out and secured. (Fig. 3.) The upper part of this

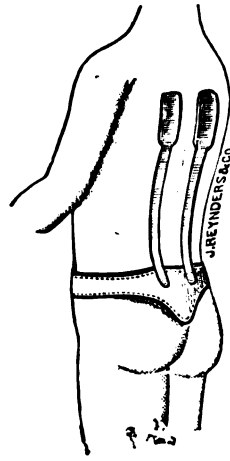


FIG. 2.

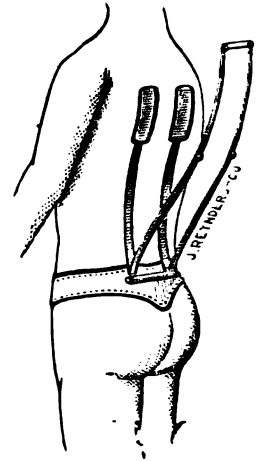


FIG. 3.

backward traction frame is secured to the body by padded straps connected to a chest plate in front, to avoid constriction, and when bound down to the body, as in Fig. 4, presents the appearance there shown.



FIG. 4.

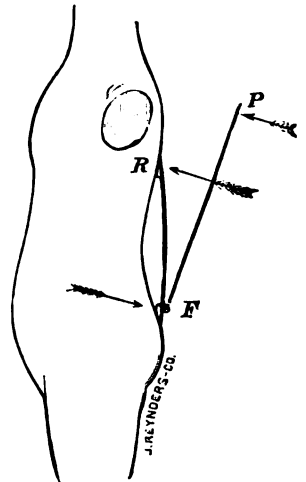


FIG. 5.

We thus perceive that by means of the two parts of this brace we can obtain the attributes desired in an effective dorsal apparatus, its mechanical action being shown in Fig. 5, by which it will be seen that after the traction frame, F P, is securely fastened at F at an angle with the table frame, F R, and the whole firmly fastened to the body, the forward tendency of the part of the body above the seat of disease would be combatted by the pads at R, and this forward tendency would at the same time act to force in the knuckle by pressure over the transverse processes of the diseased vertebræ, so that we would have a corrective automatic effect produced by the brace to keep the body erect, and at the same time improve the deformity.

Also that the spring effect produced by the setting off of the traction frame and drawing the body backward against it would cause the brace to be held more tightly against the back, and also produce the highest degree of fixation of the spine of which any brace is

capable. In the beginning of the treatment in a severe case, it is well to have the traction frame set off at such an angle as to cause considerable pressure upon the sides of the knuckle; but this angle may be lessened week by week as the patient improves, until finally the traction frame lies directly upon the pads, and becomes a mere fixation brace or support without any leverage whatever. If the case be slight or of recent date, the angle of the traction frame need be but a slight one; and as the instrument is an antero-posterior brace in the truest sense, it may be included in the commendatory remarks of Professor Shaffer,¹ who summarizes among the principal advantages of the antero-posterior support:—

"(1.) The ease with which it can be adjusted and the great comfort experienced by patients who wear it.

"(2.) It can be removed with safety at any time by placing the patient in the prone position, when such modifications can be made as are necessary to the comfort of the patient or the treatment of the case.

"(3.) The concentration of the requisite pressure at suitable and convenient points without interfering with transpiration or respiration; and, finally, the cleanliness and lightness of the whole apparatus, matters which certainly ought to be consulted in a long and necessarily tedious treatment."

POISONOUS MUSHROOMS.²

BY JULIUS A. PALMER, JR.

FREQUENT inquiry as to the best text-book on the subject of esculent and poisonous fungi leads us to notice here the two works whose titles are given in the note.

The work of Cordier is by far the most complete and of the most practical use of any yet published; while the more recent contribution to this branch of science made by Sicard contains evidence of the most patient research on the subject of the reproduction of fungi, a problem difficult of solution even by those best acquainted with this branch of the kingdom of nature.

Both attempt to pronounce upon the qualities of each species, and in that they differ from any current English work. The labors of Cooke and Berkeley are chiefly devoted to a proper classification, while those of Badham, Smith, and Hussey are too limited in their scope to be considered as text-books.

In January, 1879, the present writer contributed to the *Moniteur Scientifique*, of Paris, an article on the peculiar poison of the *Amanita* family, which article was copied and commented upon by some American medical journals. Nothing in either of these works would controvert its conclusions, which may be briefly restated as follows: Mushrooms are unfit for food by decay or other cause, producing simply a disagreement with the system, by containing some bitter, acrid, or slimy element, or by the presence of a wonderful and dangerous alkaloid, which is absorbed in the intestinal canal. This alkaloid, so far as known, is found only in the *Amanita* family, and any child can learn to rec-

ognize and reject this whole family by certain distinguishing marks, the most important of which is the volva or cup at the base of the stem.

Several attempts have been made, and not very successfully, to isolate this alkaloid; among these may be mentioned that of Schmidberg and Koppe, who obtained a colorless alkaloid to which they gave the name of muscarine; of Boudier, who, using the *Amanita bulbosa*, gave to his extract the name of bulbosine.

Mr. Sicard gives the following comparatively recent and additional testimony to the presence of the same alkaloid in another member of the *Amanita* family:—

"In 1868 Doctors Curie and Vigier sought to isolate the alkaloid of poisonous mushrooms. They used exclusively the *Amanita mappa*, because this seemed to them the most poisonous. Dr. Vigier has given to this *Amanita* two pharmaceutical forms: First, an alcoholic extract prepared by leaving for a fortnight in contact one kilogramme of fresh poisonous mushrooms crushed and one kilogramme of alcohol ninety per cent. proof. The mixture is then pressed and filtered. This tincture is given in doses of four to six grammes a day in certain catarrhal affections. Second, in the form of pills of five centigrammes of extract resulting from the distillation of the alcoholic mixture. These pills are taken in doses of three or four a day. Dr. Curie will soon publish the results of his therapeutic researches on this subject."

The use of this alkaloid as a remedial agent has long been considered favorably, and has, perhaps, made little progress chiefly on account of the difficulty of identification of species, since to the novice all toadstools look alike.

The *Amanita muscarius* (common in New England) has also been successfully employed in the treatment of chronic catarrh, profuse perspiration, skin diseases, and epilepsy.

Dr. Curtis, of South Carolina, has proposed to use the *Amanita phalloides* as a specific for cholera, Bright's disease, and intermittent fevers. His experiments were not sufficiently extended to be conclusive, but Mr. Cordier considers them worthy of repetition, and adds: "Why should not the narcotic properties of this mushroom render it a substitute for opium? It would have an advantage in the matter of its cost, for it asks for no culture. There are few wooded districts where it is not found abundantly."

There are other fungi whose peculiar properties have made them active medicinal agents so far as tested; among these the acrid milk mushrooms have been prescribed with success in phthisis, even in its more advanced stages.

But it may be noted that the authorities cited above, to which I would add my modest testimony, all recognize the *Amanita* alkaloid as the best defined of any of the toxic properties of the fungi. All these varieties are common to our woods at certain periods of the year after heavy rains. If any member of the medical profession should wish to test their properties, I should be only too happy to identify them for his experiments.

While recognizing the great value of both these contributions to a branch of science yet imperfectly understood, I regret to note very little progress in defining the action of the *Amanita* alkaloid, or in the more important matter of the treatment of a case of poisoning by such. Both of these writers advise only means

¹ Pott's Disease. Shaffer. 1879. Pages 47, 48.

² Les Champignons. Histoire, Description, Culture, Usages, etc. Par F. S. Cordier. Orné de Vignettes et de 60 Chromolithographies. Paris: J. Rothschild, Editeur. 1876.

Histoire Naturelle des Champignons Comestibles et Vénéneux. Par G. Sicard, ouvrage accompagné de 75 Planches Coloriées. Paris: Librairie Ch. Delagrave. 1883.

such as would readily be suggested to any person of sense, namely, the evacuation of the stomach and alvine canal by means of emetics and purgatives; very appropriate treatment, without doubt, in case of the ingestion of some nauseous, acrid, or indigestible element, but not otherwise. For in the first place, to quote the language of Mr. Cordier, and Mr. Sicard uses nearly the same words: "Ordinarily four, six, twelve hours, and often still more time passes before the first symptoms are manifest. And many persons have found their death who have eaten but a single piece of the stem of an Amanita."

In the article sent by me to the *Moniteur* in 1878 occurs the following language:—

"It would appear that the amanitine is introduced into the system by absorption by the vessels of the intestinal canal, so that if one could succeed in removing every vestige of the poisonous mushrooms from the patient, it is not at all proven that he could recover."

Mr. Sicard seems to hint at a similar conviction, for he says:—

"Naturally, I have sought oftentimes to arrest abruptly (*enrayer*) the toxic effects in introducing into the mouth of dogs, poisoned by design, fifteen centigrammes of mineral turbinth to provoke vomiting, and in making them take a great quantity of syrup of buckthorn. When the toxic substance was absorbed they were allowed to die — ('on les laissait mourir'). Recently I have sought an appropriate antidote; an antidote of which the effects after absorption should be diametrically opposed in the system to those produced by the alkaloid of the mushroom, defined as an acrid and stupefying poison. I have made, by means of the syringe of Pravaz, at first under the skin in the middle of the back an injection of two milligrammes of nitrate of pilocarpine. Half an hour after I gave a second injection with the same dose, but this time a little to the left of the heart. Fifteen minutes later, under the influence of such a sudorific agent, a feeble return of heat could be detected at the surface of the skin, which was encouraged by straw friction. As soon as possible, the animal was made to drink five grammes of nitrate of potash dissolved in one hundred grammes of dilution of marsh-mallows. With the aid of these means the pupil of the eye became sensitive and contracted, thus showing a change in the symptoms. In strict truth, however, I must say that the dog never returned to his normal condition, but the progress of the poison ceased, and he at least lived."

The above experiment is of value because suggesting a new element with which the physician may combat the effects of the poison after its absorption into the system by the patient. This absorption may take place not only by ingestion but by contact with the skin, as through the hollow palm of the hand, or even by the lungs, as I have proven by personal experiments made upon myself. In such a case the patient has all the symptoms of having eaten of the mushrooms, even to a peculiar leaden or ash-colored complexion.

This article would be incomplete if it failed to add that the remedy in such cases seems to be found in the skillful use of the alkaloids obtained from the *Solanaceæ*, or night-shade family, especially in the hypodermic injection of atropine. The physician may readily infer that any person who, from six to eighteen hours after eating mushrooms, has symptoms not varying widely from those indicated in cholera, is under the influence

of Amanita poison, and he must take action accordingly. The shorter the time between a meal on mushrooms and the appearance of any unfavorable symptoms, the less occasion to dread fatal consequences. So far as known the Amanita is the only mushroom which has proved fatal to human life.

REPORT ON PROGRESS IN THERAPEUTICS.

BY FRANCIS H. WILLIAMS, M. D.

THE USE OF IODINE AS A STOMACHIC SEDATIVE.

DR. GAUNT, of New York,¹ gives an account of a very extensive use of iodine for the relief of various forms of vomiting, and cites cases where he has used it in the vomiting of pregnancy, phthisis, and hysteria, in hard drinkers, in septicæmia, chronic nephritis, and in acute catarrhal gastritis, and refers to one hundred cases of gastro-intestinal disturbance accompanied by vomiting. One to five drops of the compound tincture of iodine in water, in frequently repeated doses, were used.

In some five hundred cases of gastro-intestinal troubles, treated during last summer, not a single case was lost. Iodine was given whenever vomiting threatened, and in the case of children the milk was boiled just before being taken, and diluted with lime-water. No attempt is made to explain the influence of iodine in small, frequently-repeated doses over the symptom of vomiting.

In case mucus is present in large quantities, washing it out with an alkaline solution, by means of a stomach-tube, before giving the iodine is suggested. It is well also to bear in mind the power possessed by starch in annulling the action of iodine.

The following is suggested as the best way to give the drug:—

R Tincture iodinii comp.	Mviii.—3 ss.
Bismuthi subnitrat	3i.—3i.
Glycerinæ	
Aq. cinnamomi }	aa 3ij.
Liquoris calcis	ad 3ij.
M. et sig. Dose one dessertspoonful.	

Or, better, as the above will keep only twelve hours, have the mixture put up without the iodine, and add that from a separate bottle immediately before administration.

CONVALLARIA MAJALIS.

This is one of several drugs which have been proposed as substitutes for digitalis. It was used more than one hundred years ago, has been forgotten, and again brought to notice of late years chiefly by Professor Sée, of Paris. He recommends it in palpitation of the heart, in cardiac dilatation, fatty degeneration, and also in valvular lesions with failing heart power, or, in general, in such conditions as digitalis would be found serviceable.

In this country Dr. Taylor, who published² the results of seventy cases at the Roosevelt Hospital, thought that the results obtained were as good as with digitalis.

Dr. Beverly Robinson,³ after an experience with a considerable number of cases in which convallaria was used, concluded that we have in digitalis the most

¹ American Journal Medical Sciences, April, 1880.

² Medical Record, January 27, 1883.

³ Medical Record, December 9, 1882.

efficient heart regulator and tonic yet known. No cumulative action was noticed with the convallaria.

The experience of Stiller¹ gave seventeen negative results out of twenty cases. The preparation used by him may not have been a good one.

Dr. Pels² gives a very careful and full account of the trials which he and many others have made of this substance. His conclusions are: that the aqueous extract, even in large doses, has no injurious action, at most it only promotes the movement of the bowels; as a heart tonic and diuretic it is inactive with a weak left ventricle, particularly that associated with chronic nephritis; on the other hand, in some cases of organic disease, especially mitral insufficiency without compensation, it has a stimulating and diuretic effect, but even here the action of digitalis is more marked, and of longer duration; finally, although the lily of the valley, compared with digitalis, gives rise to no dangerous symptoms, it does not equal it in efficiency. In urgent cases convallaria is not to be thought of, but digitalis should be used.

POISONING BY ILLUMINATING GAS SUCCESSFULLY TREATED BY THE INHALATION OF OXYGEN.

Dr. Alonzo Clark reports the cases of a woman forty years old, and her daughter of twelve years, who had been exposed for fifteen hours in a room filled with illuminating gas. The mother was found to be suffering from pulmonary oedema; the radial pulse was scarcely perceptible; she was unconscious and cyanotic; her extremities were cold; there was trismus with rigidity of the flexor muscles; the urine was passed involuntarily; the pupils were slightly contracted, and a frothy mucus issued from the mouth; her temperature was 96.5° F., and her respiration 40.

Inhalation of oxygen was kept up for three hours. In addition dry cups were applied over the chest, and tincture of digitalis was given endermically, in all to the amount of thirty minims. Whiskey was also given subcutaneously, and hot-water bottles were applied to the extremities. Occasionally, too, the patient was aroused by flagellation.

This treatment extended over a period of four hours, at the end of which time the woman began to show signs of returning consciousness; the pulse became more perceptible and regular, warmth returned to the extremities, and the temperature and the respiration were found to be normal. The next day the patient was able to tell her own story, and was soon afterwards discharged. The treatment of the other case was the same, except that in addition a hypodermic injection of a sixtieth of a grain of sulphate of atropine was given. This patient also recovered.

KAIRIN, A NEW ANTIPYRETIC.

A short account of the discovery of this drug by Dr. Fischer, and its use in medicine by Dr. Filehne, was given in this journal last year.³

The action of the medicine begins about half an hour after being ingested, the fall in temperature being more abrupt the larger the dose. In every case the fall in temperature is accompanied by free perspiration, which continues only while the temperature is falling;

as soon as the lowest point has been reached, which occurs after from two to four doses, diaphoresis ceases, and the temperature remains constant so long as one chooses to give kairin. During the diaphoresis, as well as after it, the patients are much relieved, especially those suffering from acute pneumonia; in this disease not only is the temperature reduced, but the pulse and respirations are made much less frequent; the pulse is strengthened, and the pleuritic pain lessened, by this drug. As soon as it is omitted for two or three hours, according to the size of the last dose, the symptoms return as before, the temperature rises to the height characteristic of the disease, and is accompanied by a chill.

In a later article Dr. Filehne says that kairin has been found of great value in a variety of chronic and acute diseases. In special cases, however, its application requires that the temperature be minutely observed during the first day. The following scheme of using kairin with adults has been worked out by him: In the first instance kairin is administered in separate doses of 0.25 gramme each, taken in wafers, and an ample quantity of water drunk after them. It is advisable to commence with doses of 0.5 gramme per hour on the first day, and to give these say four times successively, but no longer than until the temperature has reached 38° C. (about 100° F.). The temperature has to be observed once every two hours, or if possible every hour, during the first day; later on this is not necessary with the same individual. When the temperature has been lowered by the above doses to about 38° C. only 0.25 gramme is given per hour, and this is continued until the temperature is rising perceptibly, when the former dose of 0.5 gramme should once more be administered. A dose of 0.5 gramme has to be given at once if the patient feels the least chilliness. Should it be that 0.5 gramme per hour have not had the desired antipyretic effect after four administrations, doses of one gramme are given two, three, or four times at intervals of an hour. When, on the other hand, the action of 0.5 gramme per hour was perceptible after four hours without proving sufficient, 0.75 gramme is given about four times at intervals of an hour. The doses of one or 0.75 gramme per hour are stopped when a temperature of 38° C. is reached, keeping a reserve dose of 1.00 or 0.75 gramme respectively in readiness, which is to be taken at once should the patient feel the least chilliness. When the temperature has again risen the administration is started anew.

Since the organism neither gets accustomed to the medicament nor shows a cumulative effect from kairin, a careful day's experimenting in the way indicated suffices, and the dosing thus standardized on the first day may afterwards be adhered to.

When the weight of the body or the condition of nourishment is excessively low, and in cases of hectic fever, smaller doses have often to be tried first.

In intermittent fever⁴ the temperature may be lowered, but very large and frequent doses are required to keep it down, and they may give rise to unpleasant symptoms. It may be used subcutaneously, but not too often in the same locality.

On the other hand, Seifert⁵ did not find its action so good in all cases. In two cases of severe pneumonia,

¹ Wien med. Wochenschr., November, 1882.

² Centralblatt f. d. gesammte Therapie, February, 1883.

³ December 14, 1883, page 569.

⁴ Centralblatt f. d. gesammte Therapie, June, 1883.

⁵ Centralblatt f. d. gesammte Therapie, June, 1883, Untersuch. u. d. Wirkungs weise einigen neuer arzneimittel.

doses of 0.75 gramme every two hours effected no change in the temperature or pulse; in both it caused vomiting. In another case the temperature was reduced, but the patient became collapsed, and died.

The writer has given the drug to a few children and observed no unpleasant symptoms. In one child, three years old, 0.2 every hour for five hours was without effect on the temperature, which was taken hourly; 0.2, 0.3, 0.4 gramme at intervals of an hour brought down the temperature from 40° C. to 38° C. (104° F. to 100.3° F.). In a child of eighteen months four hourly doses of 0.2 gramme changed the temperature from 40.7° C. to 39° C. (105.1° F. to 102.1° F.), and again, in the same case, 0.3, 0.4, 0.5 gramme at intervals of an hour brought the temperature from 38.9° C. to 37° C. (102° F. to 98.6° F.).

A very limited experience with adults suggests that the drug will be found to have too many disadvantages, or, rather, inconveniences to ever become very popular, although as the forerunner of a more perfect antipyretic, which we may look for in the near future, it is of interest.

NITRITE OF SODIUM IN THE TREATMENT OF ANGINA PECTORIS.

Dr. Mathew Hay¹ has recently made careful clinical trials of this salt in well-marked cases of angina pectoris. In one case nitrite of amyl was inhaled from three minim capsules six or seven times a day for about a week with good results. The nitrite did not entirely dispel the pain, it merely dulled it, and was always accompanied by giddiness, which compelled the patient to remain quiet for a minute or two, and it was followed by a headache and disagreeable feeling, which lasted one or two hours.

On the theory that the action of this drug is largely due to the nitrous acid it contains, as shown by the experiments of Reichert and Weir Mitchell,² nitrite of sodium was tried:—

R. Sodii nitritis 3 ss.
Aquam ad ꝑ 3 xii.
Solve. Sig. Dose, one to two teaspoonfuls.

After a week the patient reported that he took a dose in the morning; this enabled him to get up, dress, breakfast, and walk to his office without experiencing the slightest pain, and without requiring more of the nitrite until after dinner; then it was taken only when he felt the pain coming on, and if he took it promptly it caused complete cessation of the pain in from one to two minutes. Nitrite of amyl had never completely abolished the pain. The nitrite of sodium caused no perceptible throbbing in any part of the body, and certainly no headache; apart from the effect on the pain it seemed to have no more action than so much water. In addition to the morning and noon doses he took one before going home at night, and at bed-time, as well as during the night if the pain came on. After three weeks it was found that whenever the nitrite of sodium was omitted he was liable to attacks of pain. If he took no medicine in the morning he never failed to have an attack of pain when he began to dress himself, and another on his way to his work.

It was found by comparison that the preventive action of the nitrite of sodium is exercised over a much longer period of time than that of nitrite of amyl, and

that the nitrite of sodium acts in two or three minutes, or more slowly than the nitrite of amyl.

Instead of the nitrite of sodium one or two teaspoonfuls of a one per cent. solution of nitro-glycerine was tried; its action was found to be similar to, though better than, the nitrite of amyl, but its effect did not continue as long as the nitrite of sodium.

Dr. Hay anticipates a wide and important application in various forms of disease of the simple and more safely administrable nitrites.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

JUNE 4, 1883. DR. E. H. BRADFORD read a paper on

SEVERE CASES OF CLUB-FOOT.

He called attention to the need of improved methods of treatment, and to the fact that failure was often the result of bad method rather than from want of care on the part of the surgeon or nurse. The general plan has been to do a tenotomy, then send the patient to the instrument maker for a Scarpa's shoe or other apparatus in which the foot was daily straightened by straps until it was considered ready to wear some form of ankle support. What is needed is simplicity in detail; the foot should be forcibly placed in an overcorrected position, by the hand or some mechanical appliance, and tenotomy, with division of the plantar fascia, should be done if necessary; the foot should then be fixed in this position, and finally a walking shoe should be provided of such simple construction that the mother can look after it. The osteoclast has shown that great pressure can be used on the skin without serious result, and an instrument was devised by the reader with which he was able to reduce deformities of the foot which would not yield to hand force. The instrument consists of a steel plate, to the sides of which three screws are attached in such a position that their padded and broadened ends bear on the inner side of the heel, the ball of the great toe, and the outer side of the astragalus; a padded plate is fixed over the foot to keep the sole pressed down on the bed plate of the instrument; by turning up the screws the deformity can be reduced.

It may not be possible to correct the position of the foot in one sitting; in one case with great deformity, in which the apparatus was used, it was necessary to have three trials before a good result was obtained.

In order to hold the foot in good position after correction, a plaster of Paris bandage is used, and if this is applied properly the danger of sloughs is very small; the bandage should always be put on after the foot has been placed in its new position. The foot and leg are first covered with a thin layer of cotton batting; then, the foot being held by an assistant, either in his hands or by means of one or two wide strips of adhesive plaster passed round the foot, the bandage is quickly applied, and must be carried above the knee to prevent the turning of the foot. After wearing this bandage some two or three weeks it is removed, and a steel splint is substituted, which is arranged with a joint at the ankle and a sole plate, to which the foot is attached by a bandage. After keeping the child in

¹ Practitioner, March and May, 1883.

² American Journal Medical Sciences, 1882, vol. lxxx.

such an apparatus for three or four weeks, it is best to have a walking shoe made, so that the muscles of the leg may get their normal balance. The ankle support, as usually worn, does not prevent the turning in of the foot, and this is best avoided by means of a thin metallic sole, corresponding in shape to the bottom of the foot; this is attached to a rod which is fastened to the leg higher up. The whole apparatus can be worn inside the ordinary shoe; it is light, and effectually prevents the turning in of the toes. In cases where the deformity is slight, it can often be corrected by the use of the walking shoe, without tenotomy.

DR. A. T. CABOT thought that the danger of sloughing had prevented many surgeons from trying this method, and that the reason why the reported cases had been so free from this accident was that the position of the foot had not been overcorrected before applying the plaster bandage. In one case of talipes varus Dr. Cabot had put on such a bandage, but was obliged to remove it on the second day on account of a threatened slough. In the treatment of talipes equinus, where the contraction of the tendo-Achillis is very great, there might be a danger of imperfect union of the tendon when put up in such an apparatus after a tenotomy; in such cases a more gradual method seems to be indicated.

DR. R. M. HODGES spoke of the unsatisfactory method of treatment usually followed in general hospitals; the cases cannot be treated in the out-patient service of a hospital on account of the time needed. The novel apparatus and methods shown by the reader show how much can now be accomplished in a few days which formerly required months.

DR. BRADFORD said that the forcible means spoken of involving the use of an apparatus with screws was not to be used in the simple cases. The danger of non-union of the tendo-Achillis is very slight; in one of his earlier cases there was some turning of the foot, owing to not carrying the plaster bandage above the knee. In one case a small sessile aneurism was formed on the posterior tibial artery, the result of a prick with the tenotome. It disappeared, however, on tying the origin of the aneurism. In answer to the question at what age a child could be operated upon for club-foot, the reader thought the earlier the better. He had had a patient only eight weeks old. As to correcting the deformity by an operation or by slower methods, that depends entirely on the wishes of the parents; if they desire a quick recovery there is no objection to operating. In very young children more care must be taken in applying the plaster bandage, in order to prevent chafing. The wetting with urine can be avoided by painting the bandage with some waterproof material. In reply to Dr. Hodges, he said that in correcting talipes he cut the plantar fascia first, then the tendo-Achillis. He had had one patient with a gap of one and a half inches in the tendon after the operation which had recovered with complete union.

— A correspondent asks for the experience of the profession concerning the digestibility of the lobster, particularly with reference to the point whether the common opinion is correct that that fish should be avoided by all except the strongest stomachs. Also with regard to the comparative digestibility of different portions of the fish, and whether any part is actually injurious.

Recent Literature.

A Treatise on Therapeutics, comprising *Materia Medica* and *Toxicology*, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. WOOD, M. D., Professor of *Materia Medica* and *Therapeutics* in the University of Pennsylvania. Fifth edition. 740 pages. Philadelphia: J. B. Lippincott & Co. 1883.

Of a work so well known little need be said about this last edition. It is fully abreast of the latest and best in this department of medicine, and although not much new matter has been added, the article on *Convallaria Majalis* is typical of the author's intention to include whatever promises to be of value if its claims seem to be well founded.

An interval of only six months between the last two editions, and the excellence of both, suggests that the profession appreciate the philosophical methods and scientific spirit pervading this standard work, which still retains the first place among all our treatises on this subject.

THE RISKS OF MASSAGE.

DR. JULIUS ALTHAUS, in the *British Medical Journal*, deprecates the indiscriminate employment of massage as capable sometimes of producing disastrous results. He says:—

"It is well known that at various times epilepsy, idiocy, and some forms of insanity have been treated by massage and gymnastics; but, fortunately, we now hear very little of such therapeutical aberrations.

"It appears to me that diseases of the brain and spinal cord must, on account of the anatomical situation of these organs, be inaccessible to the influence of massage, which can only be applicable to more superficial parts of the body. Apart from this, however, it is important to consider that many of the most important diseases of these organs are of an inflammatory or irritant character, either primarily or secondarily; and this should make it self-evident that massage should not be used for their treatment, even if the suffering parts could be reached by it. I will here only allude to many forms of cerebral paralysis from hæmorrhage, embolism, and thrombosis, which are followed by sclerosing myelitis of the pyramidal strands; and most forms of primary lateral, posterior, or insular sclerosis of the spinal cord.

"That which may be good for developing and strengthening healthy muscles, or muscles which have been enfeebled by disuse or certain local morbid conditions, etc., is not for that reason suitable for the treatment of muscular paralysis owing to central disease. In most cases of lateral and insular sclerosis, which are, unfortunately, now much treated with massage and exercises, rest is indicated rather than active exertion; and overstraining of the enfeebled muscles acts prejudicially on the state of the nervous centres. I have recently seen quite a number of instances in which the central disease had been rendered palpably worse by procedures of this kind; and in a case of cerebral paralysis which was some time ago under my care the patient had, after four such sittings, been seized with collapse, which nearly carried him off."

Medical and Surgical Journal.

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THE CORONERS MUST GO.

THERE are many indications that the race of coroners in this country is destined to be exterminated. The process of eradication may be slow in some regions, but the signs are clear that it is certainly in progress. The antiquated jury method of investigating violent deaths is suffering from a senile gangrene which renders it highly offensive. Ever since legislative action in Massachusetts, in 1877, initiated rational treatment, and pointed the way to an improvement in this department of the public service, the American coroner's fate has been sealed. The medical examiner system, which has been in successful operation for six years in this State, is no longer on trial as an experiment. It is sufficiently recognized here as one of the most fortunate reforms which the Commonwealth ever accomplished. It has been watched with keen interest by those who originated it, by those in later sympathy with it, and by those who thought they had little reason to bestow their favor upon it; and it is truly remarkable that scarcely a word of adverse criticism has been elicited in all the six years of its existence. It has been found to fulfill its mission quietly, effectively, and economically.

It is not extraordinary, therefore, that sagacious men in other communities, observing these results, have been stimulated to attempt the substitution of the medical examiner for the coroner through legislative enactment. From States even remotely situated, like Kentucky and Louisiana, inquiries have come concerning the practical working of the Massachusetts plan. Much interest has been manifested in Philadelphia with regard to the matter; while in the neighboring States, Rhode Island, Connecticut, and New York, more zealous efforts have been made to effect the desired change, and the views and wishes of the advocates of the reform in those States have been formulated in bills, which have been submitted for legislative action. It was hardly to be expected that the statute of Massachusetts would be adopted in all its details in other localities; hence, in the bills above alluded to, while the important fundamental feature of the new departure is fully recognized, and the medical examiner entirely supplants the coroner, there are to be found many proposed modifications of the Massachusetts law, growing, undoubtedly, out of a desire to avoid too violent interference with long-established usages. Thus, in the latest of these drafts, that pre-

sented by the Newport Medical Society to the General Assembly of Rhode Island at its last session, we find some important variations from the original medical examiner statute. For example, this bill proposes that the medical examiners shall be between twenty-five and forty-five years old, and shall be elected by the legislature in general committee. Again, it provides a premium for short autopsy records as well as long ones, — one dollar for the first one hundred words or fraction of a hundred, and twenty cents for each additional hundred or fraction of a hundred." The "necessary expenses for postage, stationery, and travel" are to be paid by the State, the creditor in the matter being the interpreter of the word "necessary." The medical examiner is to examine the dead bodies of persons who "are supposed to have come to their death by illegal means [an unfortunate expression, it seems to us], or without the recent attendance of a physician in good standing," the interpretation of the words "good" and "recent" being left with those who receive the fees for the service rendered. The word "person" is defined as including "prematurely born children." One of the witnesses at an autopsy must be a physician, whose attendance may be compelled by subpoena; his fee for the service is fixed at four dollars, and his "necessary expense" is to be paid by the State. An "autopsy" is to be understood as "the inspection and examination of any or all of the internal organs," — an excellent definition if the words "any or" were omitted.

We have pointed out these proposed departures from the statutory provisions relating to inquests in vogue in Massachusetts, not with any desire to indulge in captious criticism, but rather with a wish to co-operate in perfecting a system which has great merits already tested by time. The Massachusetts law is not faultless; those who have administered it admit that in certain minor particulars some amendment is desirable; but as a piece of legal machinery for the detection of crime and the protection of public morals, it has worked with unexpected smoothness and efficiency, and we should deprecate any tinkering of its parts which would impair its usefulness. We think it would be a mistake to take the nomination of the medical examiners out of the hands of the governor, and make it an occasion for legislative squabbling and pipe-laying; or to appoint an examiner under thirty years of age, or to be debarred from appointing one over forty-five; or to pay a fee for writing an official report of an autopsy with a petty temptation to be either brief or verbose; or to offer the smallest inducement to take money from the public treasury through an inevitable elasticity in the interpretation of any words in the statute; or to discount the efficiency of the medical examiner as a medical detective of crime by diverting his specific functions into other paths of usefulness, such as certifying the cause of the death of persons who are known to have died in the course of nature but without recent medical attendance. One of the great objections to the coroners has always been that by indirect incidental perquisites they have cost too much for the service which they rendered;

any legislation which abolishes them and substitutes another system ought, by all proper and liberal provisions of a positive and well-defined character, to attract to the vacated places truly "able and discreet men," without offering to them any direct or implied opportunities to enlarge the pecuniary advantages of their office or to abuse it in any manner.

We note with satisfaction that, as in Massachusetts in former years, so now in other States the medical profession is most zealous in urging forward the reformed methods of managing inquests. We wish the friends of a good cause all possible success. It is hardly to be expected that the fortunate combination of circumstances which so signally favored the reform in Massachusetts in 1877 will again be witnessed elsewhere; but the earnest purpose and wise judgment of our neighbors will surmount all their difficulties, and accomplish the end desired. The Rhode Island Medical Society, at its meeting to-day, will have the subject as a special theme for discussion, and there can be but little doubt concerning the tone of its deliberations.

NEW YORK'S WATER SUPPLY.

THE questions connected with the water supply of large cities are interesting either directly or indirectly to a very large portion of the population. The discussions and plans of the officials connected with the water supply of the largest city of this portion of the globe are worthy of study in other quarters, and we give them without comment.

At a meeting of the new Croton Aqueduct Commission held September 12th, at New York, a number of prominent gentlemen, including Hon. Erastus Brooks and Dr. Elisha Harris, of the State Board of Health, and Prof. Charles F. Chandler, recently President of the City Board of Health, were invited to be present and discuss the proposed plan of building a large dam at Quaker Bridge. The Hon. Orlando Potter said that it was important that the commission should know how such a dam would affect the public health. The water would be drawn down fifty-eight feet every year, and the question was how to do this without injury to public health.

Dr. Harris remarked that a question of great moment was, whether the plan proposed contemplated reservoirs independent of each other, and another question was, whether or not malaria would be increased. He said that physicians had no fear whatever of deleterious water being brought to the city by the aqueduct. The Croton water had never yet made anybody ill, and all fears of anything of that sort were groundless, even when there was a little odor about the water, as occasionally happened. There was scarcely another valley in the world known to medical men so desirable for use as a source of water supply.

The commission then listened to an elaborate report from the Department of Public Works, giving additional plans, for the increase of the water supply, with special reference to a plan worked out by Chief Engineer Church to build a subsidiary dam at Mus-

coot Mountain, in order to overcome any sanitary objections which might be raised to the construction of the Quaker Bridge dam. This smaller dam would be near the upper end of the present Croton Lake, about six miles above the present Croton dam, and could be completed by the time that the new aqueduct is finished, at a cost of about \$400,000. Two important purposes would be subserved by it. Its effect on the water supply would be to form a lake of 2,500,000,000 gallons storage capacity, which, in conjunction with the present Croton Lake, would be sufficient to supply the new aqueduct with water until the Quaker Bridge dam is completed, even if the latter should occupy a longer time than is at present estimated. The second and most important effect of the Muscoot dam would be the sanitary protection it would afford to the region above the dam. During dry seasons it would be necessary to draw down the large reservoir from twenty to sixty feet, and this would inevitably lay bare many acres of land at the upper end of the reservoir, and expose a number of thickly settled towns and villages to the dangers of malaria. By the construction of this subsidiary dam, however, the whole difficulty would be obviated, for with such a dam, when the large reservoir was drawn down, the upper shoals would still remain covered, and the proper hygienic conditions be maintained. Dr. Harris and Mr. Brooks, of the State Board of Health, having carefully studied Mr. Church's plan, both expressed themselves as much pleased with it, as they believed that the lake thus formed by the Muscoot Mountain dam would do away with the objection that malaria might be spread from the shallow flats at the upper end of the large reservoir.

MEDICAL NOTES.

— At the last congress of German surgeons (*Annals of Anatomy*, September, 1883), Schönborn (of Königsberg) exhibited a specimen removed from the stomach of a girl who had suffered for two years. A tumor of the size of a fist could be felt in the gastric region, the same being painful on pressure. The diagnosis as between a tumor of the spleen or of the omentum was uncertain. Upon operation it was found to lie in the stomach, whence it was removed. Incision of the tumor showed it to consist of short hairs matted together. It afterward transpired that this girl, with a number of her schoolmates, "in order to gain a clear voice," was in the habit of biting off her hair and swallowing the ends thus bitten off. The case is not unique. Seven similar cases are recorded, one of which was complicated by a second similar mass in the intestine; but all the others ended fatally — one from hæmorrhage from the stomach, the others from peritonitis, or incurable vomiting. Some of these patients had swallowed the hairs in their full length.

— At the same meeting a case of wound of the thoracic duct was reported by Boegehold (of Berlin). He had helped his chief, Wilms, at an operation for a

large cancerous tumor of the left supra-clavicular region. During the operation he had to dissect down towards the junction of the jugular and subclavian veins. While scraping out the diseased tissue with a sharp spoon, he was astonished at a stream of milky fluid as large as a small straw being poured out over the operation field. It was checked by a tampon of salicylic cotton, after which the wound healed without reaction, while the general condition of the patient seemed in no way disturbed, and he lived for six months. No autopsy could be secured. There was not the slightest doubt as to the injury. The extreme rarity of this accident led Boegehold to study its literature. He was able to find but one authentic case, related by Bonet in his work on practical anatomy published in 1700. The patient was wounded in the breast by a bullet, and for several months a milky fluid escaped in considerable quantity from the bullet wound, while death finally was caused by inanition and paralysis.

— An English contemporary remarks that Herr E. Merck, of Darmstadt, at the instance of Professor Hegar, of Freiburg, has succeeded in producing a phosphate of codeia, which has the great merit of being soluble in four parts of water, so that it can be used subcutaneously. It crystallizes in small four-sided columns, is white, rather bitter to the taste, and resembles the sulphates and hydrochlorates of the same base. In its action it resembles morphia, except that it is milder, and the symptoms of intoxication are less pronounced. The dose required is about double that of the salts of morphia. No marked local disturbances followed the subcutaneous employment of the drug.

— A somewhat remarkable testimony was given by a medical expert at a recent trial for rape before the high court of judicature of England. The witness, who had examined both the plaintiff and the accused, stated in his written report that: "On pushing back the foreskin of the penis of the accused there was an odor perceptible peculiar to woman." He argued that this was conclusive of coitus having occurred.

— Faience is the newest vehicle of contagium which has been discovered. It seems that porous ware may become literally infiltrated with noxious matter, and may possibly be the receptacle and breeding ground of the germs of diseases. M. Constantin, who has made this discovery, says that even glazed earthenware is not free from objection, for it always contains rugosities and chinks, however minute, into which undesirable substances may enter from the fluid contained in these vases en faience. He would proscribe such glazed ware from hospitals where contagious diseases are treated. Glass and porcelain, he says, ought only to be found there.

— It is reported that Dr. Jakimovicz, of Jarvszinka, in the government of Kiew, Russia, has just died at the age of one hundred and six, and that he was able until nearly the close of his life to superintend the carrying on of an extensive practice.

— The *Medical Press* pertinently says *à propos* of physiological research and pigeon-shooting: "By a majority of nearly two to one our hereditary legisla-

tors have given another year of impunity to the cruel slaughterers of the dove. Our legislation decrees that physiological research promoted for the protection of human life is a crime to be put down by law; and most effectually have they put it down, except in the case of a few favored individuals, who work under license, and under serious restrictions. When it becomes a matter of interfering with the 'noble sportsman,' however, it is quite another affair; and the peers, headed by Lord Redesdale, have declared, as far as in them lies, that the noble sportsman is to be let alone. The current number of a fashionable contemporary records that last week a member of our nobility won three pigeon-match cups; but no record is given of the number of pigeons massacred, nor could any record be made of the mutilation and dying agonies of the hapless creatures smashed with shot as they hovered dazed above the traps in which they had been confined. Probably there was more pain and suffering to the brute creation on that occasion than would occur in the physiological laboratories of the empire in a year, and yet the law says to the investigator, 'Cease,' and to the pigeon-match competitors 'Go on.'"

The *Lancet's* comments on this subject are still more radical and outspoken. It says: "Pigeon slaughtering is precisely the sort of pastime which would commend itself to the instincts of the feeble-minded and unmanly clique of persons who formed the majority of the Upper House. As a matter of absolute fact, the only consideration which preserves the sanction of the law for pigeon-shooting is the excuse it offers for petty gambling. Anything more disgraceful than the betting which goes on at the so-called 'clubs' which assemble for the purpose of slaughtering trapped pigeons, it would be difficult to imagine. For the session this measure is lost. Next year it will be revived; and then doubtless, with the accustomed cowardice of their house when actively pressed, the peers will pass the bill. Meanwhile by its rejection they have driven another nail into their own coffin."

— A case of death from a wasp sting has recently occurred, according to the *Medical Times and Gazette*, in the person of a lady, aged fifty-five, of Mark Hall, near Harlow, who died within half an hour after receiving the sting on her little finger. At the inquest it was stated that she fainted almost immediately after being stung, and never recovered consciousness. Dr. Day deposed that death ensued from syncope, produced from excessive pain caused by the wasp sting. Some other similar cases have since been reported. We notice that a correspondent of an English journal believes that for some reason such fatal cases are especially seen in the autumnal season.

NEW YORK.

— On Friday, September 14th, Health Commissioner Raymond invited all the milk dealers of Brooklyn to meet in the Common Council chamber, when Dr. Bartley explained to them the various tests by which they can determine whether the milk they

purchase is of the required standard. After this conference, the licenses of such dealers as are detected in selling adulterated milk will be peremptorily revoked.

— A lad employed in a lawyer's office in Brooklyn during the past year became so addicted to smoking cigarettes and chewing tobacco that he recently died of narcotic poisoning.

PHILADELPHIA.

— The colleges here began their fall sessions this last week (September 10th), and have already a fair number of students in attendance. Of course bright anticipations are indulged in with regard to the size of the prospective winter's class, but whether they are fully realized or not there is, however, sufficient evidence that Philadelphia is not in immediate danger of losing its old-time prestige as a great medical centre. With regard to the preliminary course it is noticed that some of the elders have learned practical wisdom from experience, and now pay more attention to the *personnel* of the lecturers, instead of offering poor wine at the beginning of the feast, and intrusting these lectures to the hands of assistants, as too long had been the custom. Many members of the Faculty themselves now lecture to the earliest arrivals, thus securing those of doubtful mind who might be repelled by even the best efforts of a tyro even if he does rejoice in the title of Adjunct Professor.

The societies are also starting out with a rush, and the plans for a winter of active work have been to a large extent already matured. A few years has seen great changes in our College of Physicians. Under its new and progressive management, headed by Professor Stillé, a series of improvements have been inaugurated, the end of which it is feared may greatly disturb the equanimity of some of the older and more conservative Fellows. Through the generosity of a distinguished member of the Committee on the Mutter Museum a fund has been actually established for entertainment purposes, and arrangements are contemplated for giving an annual dinner, and also receptions at which ladies will be present. The introduction of the telephone, and the providing of a comfortably furnished conversation and smoking room during the past year or two, is leading (it is hinted) to the establishment of a lunch room on the premises, where Fellows may obtain some light refreshment. The Nurse Registry Bureau, also, is more than ever growing in usefulness, and promises to have a good surplus at the end of the year. The most skeptical may be convinced that a wondrous change has come over this venerable institution, by comparing its last annual volume with its immediate predecessors. New life has been infused into the organization within a few years, and as a consequence a large number of applications for membership have been handed in, and still more may be reasonably expected. The other societies, the County Medical Society, the Pathological Society, the Obstetrical, the Academy of Surgery, and the rest, all report progress and continued growth.

— As an illustration of the value of last winter's

lectures to the police force on minor surgery and early aid in emergencies, it is reported that during the month of August the police attended twenty-four cases in which surgical knowledge was necessary.

— A peculiar case occurred recently, which deserves notice from its rarity according to the best authorities (if the superintendents of insane asylums may be quoted as the best authorities upon this subject). An elderly man, Frederick Haas, being, as was afterwards testified, of a sound mind, was sent to the Norristown Insane Asylum, by order of the court, he being declared by a physician to be insane, on application by his relatives, who wished to be relieved of his support. His son, who was absent from home at the time, on returning learned with surprise, from one of the daily papers, that his father was in the asylum; he at once went to Norristown and threatened to take out a writ of habeas corpus unless his father was released. The superintendent upon being informed of this proposed action discharged the old gentleman with a certificate declaring that he was of "sound mind," although he had been confined for a week among the insane, and classed with them!

The possibility of the future repetition of the Haas case, in this State at least, will, it is believed, be effectually prevented by the new law, which went into effect on the 17th of this month. This measure provides that every doubtful case of insanity shall be promptly investigated by a commission appointed expressly for that purpose. By this means the prolonged detention in any asylum in Pennsylvania of a sane person will be effectually prevented.

Miscellany.

POSITION IN LABOR.

DR. A. DRUMMOND MACDONALD read a paper at the recent meeting of the British Medical Association on this subject, in which he took exceptions to the ordinary position in labor as practiced in Great Britain, the woman lying on the left side *with thighs flexed*. While admitting that this position is convenient for commencing obstetric operations, he advocates in terminating all, or nearly all, labors, what he terms the straight-bodied or (for the lovers of classic expression) the orthodematic position, — a right or left sided position, with the lower extremities adducted and placed as nearly as possible in the line of the body axis.

His argument is that when the thighs are flexed an artificial tension is induced by the dragging of the skin of the nates and posterior aspect of the thighs on the perineal tissues through the skin and subcutaneous tissues over the base of the perineal body and fourchette (abundant adipose tissue is, he thinks, a contributor, in primiparæ, at least); and also he believes some amount of resistance to distention of the pelvic outlet is produced by the tension or traction of the stretched *glutei maximi* on the coccyx and posterior surface of the great sacro-sciatic ligaments. In this acquired tension the powers of parturition, or the obstetrician's arm, or both, find an additional element to be overcome, which is also met by the presenting part a little nearer the perpendicular, so that increased power is demanded,

and the force not only overcomes the resistance, but does so by more or less solution of the continuity of the resisting body,—the vulvo-perineal tissues. Whereas in the straight attitude the natural obtuseness of the angle of inclination of the perineal plane is preserved, and whatever laxity of parts is present is not interfered with,—thus by diminished resistance expediting labor and helping to maintain the integrity of the pelvic floor.

As a practical evidence in favor of his method he cites his results regarding perineal laceration, mentioning for comparison the proportion of cases of this mishap given in the standard works, Schroeder describing some degree of laceration as occurring in sixty-one per cent. of the cases, while Dr. Duncan's deputies at the Edinburgh Maternity experienced in the most favorable view fifty-two per cent. of perineal lacerations in twenty-five cases of unaided primiparous labors. Considering slight posterior tears of less than one half an inch to belong to the fourchette, in that series of twenty-five cases were thirteen instances of laceration of the perineal body, four of the fourchette, and eight in which none of the so-called "inevitable" (lacerations) took place. The author cites (hardly fairly, as it seems to us), as further examples of what the flexed position alone can accomplish, two cases of primiparæ coming under his own observation, but where he was not present when the child was born. One had assumed the dorsal decubitus, with the knees well drawn up; the other was delivered at stool. They were cases of head presentation at full time. The first child was of average size, the second over average, and both perinaeums were ruptured to the external sphincter ani. Obviously the position might be described as being curved in both instances, though it might be doubted if the rupture could be laid solely to the position, as the labor was presumably rapid.

In favor of his "straight" position Dr. Macdonald says: "What have I to tell of the straight-bodied lateral position? Firstly, I rely upon the general statement of nearly sixteen months' experience of its beneficial results; and, secondly, I adduce special evidence derived from twenty-five primiparous cases, in which this position was used, as well as mention corroborative cases. Time will not permit of much detail, but, briefly, eleven out of the twenty-five were head presentation forceps cases, and in four there was no laceration, or only the 'inevitable'; in four the fourchette was more or less lacerated; and in three the perineal body was in various degrees trenched upon (from slightly to within a quarter of an inch of the anus in a case of rigidity). Fourteen were unaided deliveries, and in ten the fourchette was entire, in three it was lacerated, and in one the perinaeum was half torn by both shoulders shooting down together. They were full-time occipito-anterior presentations save one."

The weights of the children are given to show that they were of at least average size, and the author says that with this method, including aided and unaided cases, "we find a record of only sixteen per cent. of laceration of the perineal body, which, even in view of the very favorable figure, through care being taken, of Olshausen quoted by West (twenty-one per cent. in primiparæ), goes to prove a considerable balance of practical influence to be accorded to an attitude whose benefit we theoretically at first glance perceive. Corroboratively, and as leading up to an universal affirmative proposition, I may mention in multiparæ an oc-

cipito-posterior, face becoming occipito-posterior, an occipito-posterior forceps case, a breech, and a case of podalic version, all delivered in the straight-bodied position without laceration.

As to the *method*: In unaided cases it is simply to place the patient longitudinally in bed to commence with (unless an extraordinary vaginal examination be requisite), and then to straighten the limbs as the presenting part descends upon the perinaeum. In forceps deliveries the patient's shoulders are brought round by the nurse parallel to the edge of the bed, while the operator holds tight his grasp; a little additional assistance places the patient further from the edge, but within convenient reach, a procedure in which there may be theoretical but no practical difficulty."

BROMIDE OF ARSENIC IN DIABETES MELLITUS.

Soon after the announcement by Dr. Clemens of the benefit to be derived from bromide of arsenic in diabetes the remedy was employed in this disease by Professor Korányi, in Budapest. The medicine was administered to a man twenty-two years old, who when entering the hospital was so weak that he could with difficulty ascend the steps to the clinic at the time of his admission, February 15, 1882. Through the administration of the bromide of arsenic this patient was so greatly benefited that on May 9th he was discharged from the hospital, and was at once enrolled for military duty. During the time of treatment his weight increased from 48.5 kilogrammes to 56.6 kilogrammes, and the loss of sugar in the urine, which in the first few days varied in amount from 170 to 411 grammes in twenty-four hours, was entirely suspended. This surprising result continued after the patient was given a mixed amylaceous diet, and the arsenic was withheld. Before the arsenic was prescribed at all, the patient was for some days confined to a strict diet, by which means the amount of sugar was sensibly diminished from 298 grammes by mixed diet to 113.52 grammes in twenty-four hours. The diet consisted of breakfast of bitter Russian tea, two to three soft-cooked eggs, or bacon; dinner, soup, cooked beef, roast meats, with green vegetables. During the whole day one water biscuit (wassersmell). The first cycle of treatment with bromide of arsenic and animal food lasted eleven days, in which the dose of the drug was increased from three to six drops. The result must be acknowledged a most brilliant one, for on the eleventh day (21st March) sugar could hardly be detected in the urine, and steadily diminished day by day. During the treatment the average amount of sugar excreted was 55.35 grammes per twenty-four hours, that is, half the amount which was previously lost during the time in which the patient was treated by means of an animal diet, or one fifth the original quantity lost daily by the patient. The diet of animal food was now resumed without the medicine, when traces of sugar could be detected in the urine at times, while at other times none could be detected. On the sixth day the patient was given rice in addition to his previous diet, when sugar appeared to the amount of one per cent. in the urine, and the treatment by the arsenical bromide was at once resumed. From this time the medicine was continued in the dose of five drops daily for twenty-seven days, with a modified diet,

containing, in addition to meat, 150 grammes rice and two biscuits daily. During this period sugar was almost always absent from the urine, never being found in a greater amount than 0.1 to 0.3 per cent. After this for a period of some days, the diet was made to include a variety of amylaceous substances, and the medicine entirely withheld, and the only variation was that on two days sugar appeared to the extent of twenty-four and twenty-nine grammes, respectively, in the urine. During the remainder of the time the urine was absolutely free from sugar.¹

[The translator has employed the same remedy as is here mentioned, a compound of bromine with arsenious acid, the nature of which is not yet satisfactorily determined, in the treatment of a case of diabetes mellitus of long standing, in which there has been a loss of thirty-three per cent. of the original weight, ravenous appetite, tormenting thirst, and an excretion of urine amounting to many quarts daily. The amount of sugar in the urine amounted to 35.71 grammes per fluid ounce, or seven and one seventh per cent. The result of treatment by means of this new remedy is awaited with much interest. — A. N. B.]

CHRONIC STARVATION AND "DELICATE" FEMALES.

DR. GRAILY HEWITT, in the opening address before the Section of Obstetric Medicine, at the recent meeting of the British Medical Association, spoke of what had been in his experience a fruitful cause of that train of symptoms often called *delicacy* in young females, and usually associated with some displacement or other abnormality of the generative system. He says:—

"Physiology teaches the necessity for a continuous supply of a certain quantity of food. The popular impression is that some people do not require so much food as others; and, consequently, important quantitative diminution in the supply often escapes attention. I must confess that, not very many years ago, I shared in the popular impression. What induced me to form the opposite conclusion was that, in the first place, I was struck with the fact that in almost every case coming under my notice a state of what was termed 'weakness' by the patient had been notably present; and, secondly, that, on inquiry, this weakness was almost always found to be associated with a notably deficient dietary. For the last six or seven years I have tested the accuracy and applicability of these generalizations, by carefully inquiring into the past history of patients, mostly suffering from some uterine or ovarian disease, or some affection incidental to childbed, and these conclusions have stood the test of this long-extended inquiry. I have to state the important conclusion that a continuous insufficiency of food, or what may be termed a 'chronic starvation,' more or less intense in different cases, was found to have existed almost universally. Consequently, I have naturally been led to consider chronic starvation as a most important factor in disease, certainly in those classes of cases which have come more particularly under my notice."

After giving a few illustrative cases he continues:—

"I have been much interested in observing, also, the effects of previous insufficiency of food in appar-

ently predisposing patients to attacks of puerperal septicæmia. In the cases of this disease which I have seen in consultation, I hardly recollect having seen a case where the patient so affected had, during the pregnancy, lived fairly well; and the worst cases have been those in which the patients fed badly and insufficiently during the pregnancy, and had been fed on a gruel diet after the labor was over. In cases where severe sickness during the early part of the pregnancy prevents the proper nutrition of the patient, the system is liable to become much impoverished, and an insufficient dietary may be, and often is, the preliminary to a dangerous childbed.

"With very few exceptions, and those exceptions only tending to prove the rule, it is, I hold, impossible to find patients suffering from chronic uterine disease who have not undergone at some former period what may be termed a starvation process; and careful inquiry generally elicits the fact that the quantitative deficiency in the diet extended over a considerable period. In many cases the patients are found to be still under the influence of a deficiency in this direction, and to be 'eating,' as the expression is, 'next to nothing.'

"The period of life during which quantitative deficiencies in the dietary are most common is the two or three years immediately following the arrival of puberty. The girl is at school probably, her appetite is bad, or the food is not palatable, or is deficient in important particulars, or, as I have found in some cases, she eats little in order to keep thin; the strength fails, the appetite diminishes, and a habit of taking little is formed,—particularly little animal food is taken. Three or four years of the most critical stages of life are thus passed,—a time at which the body should be growing fast, and to maintain this growth in adequate vigor large supplies of nutritious material are required, instead of which the supply is far below the normal standard. The result is a general impairment of vigor and of vital action. On the generative organs the effect is, as I have observed in numbers of cases, most decidedly injurious; and the effect in most instances is of this kind, that the tissues of the uterus lose their normal firm, healthy consistence.

"It is generally admitted by authorities on the subject of diet that nitrogen is the most essential of all foods, and that a certain amount—about three hundred grains—should be taken daily. In cases of chronic insufficiency of food, it appears that the diminution in quantity of food most frequently affects the nitrogen. Meat is the article of diet which, as a rule, is the source of the greater part of the needed amount of nitrogen, for in England, at all events, meat is the popular article of food; and, in cases of chronic starvation, we mostly find that the quantity of meat taken is exceedingly small. 'Never a meat eater,' 'do not like meat,' 'have got out of the habit of taking meat,'—such are common replies made to interrogations of patients under these circumstances.

"No doubt meat can be replaced dietetically by other foods containing nitrogen in sufficient quantity; but practically, owing to the habits of families, good substitutes for meat are not easy to find. The weakly one of the family is too often allowed to take her own course, and, if she does not take meat, often gets nothing sufficiently nitrogenous to answer the same purpose. Of all the nitrogenous foods meat is admitted by all authorities to be the most easily digested, most easily assimilable, and most rapid in its nutritive action.

¹ Wiener Med. Zeitung, January 16, 1883.

Milk is, of course, a most valuable alternative food; but in these cases of absence of sufficient meat we do not find it has ever been taken in any such quantity as to make up for the deficiency; and the quantity of bread consumed, even supposing it to be pure and of good quality, is in such cases entirely inadequate to supply the required quantity of nitrogen. I need not allude to the effect of deficiency in the other constituents of the diet. It is sufficient for my present purpose to show that the nitrogenous elements, while they are of all the most important, are those which are markedly absent in the cases now under consideration."

THE TREATMENT OF ATONIC DYSPEPSIA.

IN an article on Atonic Dyspepsia¹ Dr. J. Milner Fothergill thus discourses on the question, What is it which needs improving, the assimilation of hydro-carbons or the assimilation of albuminoids, or both?

"This is a matter too little insisted upon. Too commonly action is taken rather blindly, and malt extract (diastase), or pepsin, or pancreatic preparations prescribed without that discrimination which is so desirable. My own rule, so far as it is formulated, and it needs some corroboration (possibly some correction), is taking the following direction: When the patient is spare and too thin, then starch and sugar are indicated, and diastase should be added to farinaceous matters. Surplus sugar is laid down in the body as fat, that is, within the storing capacity of the organism. Then when there is any tendency to glandular degeneration, and that growth of lowly connective tissue spoken of commonly as tubercle, the indication is some fat which can be assimilated, of which cream, butter, and cod-liver oil are the most digestible forms. When it is desirable to increase the power of assimilating fat, there are several measures which may be adopted, singly or together. There are agents which stimulate the flow of bile, which emulsionizes fat so that the pancreatic secretion may further act upon it, and the most useful of these is ipecacuanha. Either has been found to stimulate the flow from the pancreas, and so aid materially in the assimilation of fat. It might be given with liquor pancreaticus and cod-liver oil. Sometimes when cod-liver oil is not assimilated, it is well to resort to the following plan: The oil is observed unchanged in the stools, *en masse*, never having been divided into an emulsion. Here it is well to remember that a fatty acid helps in the emulsifying of fat. So give some castile soap, say two grains, with two grains of dried ox-gall, in a pill, about two hours after a meal, when the contents of the stomach are passing into the duodenum. The fatty acid and the bile assist the natural efforts, and then the assimilation of fat is often materially aided."

Regarding indications to be gained from the appearance of the tongue, the author remarks:—

"In very acute conditions it may become necessary to give milk and milk gruel already largely digested by the addition of liquor pancreaticus, or these may be given at times with ordinary milk and seltzer water or lime-water at other times in the day. Such are conditions where there is much gastric irritability with vomiting, and a tongue denuded of epithelium or seen to be covered by a growth of young epithelium. This

condition is not uncommon in the course of phthisis, and when it shows itself it requires its own peculiar treatment, all others being abandoned for the time at least. Here the line to be taken is that of alkalies and bismuth with or without some hydrocyanic acid. Whenever the tongue is raw or bare then alkalies are to be given, and acids carefully eschewed. If the reader has doubts about the last, let him just try the experiment with his eyes open, and watch it. It will not be long before the results will be apparent to him. Bismuth with soda in calumba is the old and well-known combination for such state, and with it the milk dietary just described may be combined. More commonly, however, a less grave and acute condition is found where the state of the tongue is just the opposite, namely, covered with a layer of dead epithelium. Here acids are not only unobjectionable, but are very useful. Indeed, soda sulphate with some acid is the combination which gives the most satisfactory results. Under this the tongue soon cleans, the appetite returns, and the stools are of a normal color. When the primæ viæ are once more acting normally and in a healthy state, then, and not till then, may some chalybeate be given. But as long as the liver is in any way disturbed chalybeates are useless, and usually disagree. When the appropriate time comes then iron is useful, but however impatiently the time is awaited it is well to be patient. To resort to iron prematurely is a very common mistake. Sometimes when the tongue is placed in a side light a yellow shade can be detected, and so long as that remains so long must chalybeates be withheld."

Among hepatic stimulants he places more dependence on ipecac than on mercury, arsenic, euonymin, baptisin, iridin, leptandrin, or any other of the so-called cholagogues. Of this he says:—

"A century of experience tells of the utility of ipecacuan in indigestion. It was a constituent of the dinner pill of the last century. Not only does it stimulate the liver, and so be useful in cases of indigestion where there is either bile acids formed in excess or lithates present (that is, the peptones which find their way into the portal vein from the intestinal canal, and which, converted into proteids, are elaborated into the albumen of the liquor sanguinis by the liver normally, are transformed instead into bile acids or urates; the patient loses flesh, and on a flesh dietary only makes more bile or more lithates without gaining weight), but ipecacuan is a "pepsin persuader" from its action on the gastric lining membrane with its multitudinous glands and follicles. Ipecacuan combines properties, indeed, as does no other agent, in my opinion. Then there is often atony, either general or in the bowel, and for this strychnia is an admirable remedy. Perhaps, too, flatulence, for which a carminative is indicated. Then there is the vehicle, which may or may not be a laxative, according to the case. The pill would stand then somewhat as follows:—

R Strychniæ	gr. 1-20.
Pulv. ipecacuan	gr. 2-3.
Pulv. piper. nig.	gr. iss.
Ext. gentian	gr. i."

— Dr. Squibb has substituted for the ordinary blue and red litmus paper a single color, namely, purple. This purple litmus paper turns red with acids, blue with alkalies. It is claimed to be much more delicate and convenient.

¹ Medical Record, September 1st.

MORBID CHANGES OF THE THROAT, LARYNX, AND AIR-PASSAGES IN SOME ACUTE INFECTIOUS DISEASES.

THE *Edinburgh Medical Journal* (July, 1883) quotes from Dr. E. Löri, Budapest (*Jahrb. f. Kinderh.*, xix. 1). In measles, twelve to thirty-six hours before the appearance of the skin rash, there is a diffuse or macular hyperæmia of the mucous membrane of throat, larynx, and air-passages, diffuse usually in the mouth, macular on the tonsils and back of the throat. Within twelve hours from the appearance of this hyperæmia there occur small papules, first on the palato-glossal folds. About the time that the skin eruption appears there is profuse catarrh of pharynx, larynx, and trachea, with rapid shedding of epithelium, and frequent formation of superficial erosions. In the trachea the swelling around these latter may give rise to stenosis. According to the writer the appearance of such ulcers in the larynx augurs the occurrence of tuberculosis. In scarlatina the throat is affected twelve to thirty-six hours before the outbreak of eruption. The writer states that there is often a sudden disappearance of the affection of the mouth and pharynx coincident with the eruption on the skin coming out.

Frequently the eruption in the mouth closely resembles that found with measles. In rubeola there is also hyperæmia, diffuse or spotted, of the larynx and trachea. In small-pox the mouth is affected at the same time as the skin. The pustules are small and imperfectly filled, dry up in two or three days, and in six days are only represented by red spots. Bleeding from them is very common. The writer recommends the use of ice poultices round the neck, ice internally, and such astringents as tannin applied after puncture of the pustules. In chicken-pox there occurs either diffuse hyperæmia of the mucous membrane, or a few scattered pustules. In typhus and typhoid, acute catarrh of the pharynx, larynx, and trachea is of frequent occurrence, and often proceeds in the larynx to the formation of ulcers, which have little tendency to heal, and occasionally, about the sixth or eighth week of the disease, cause perichondritis. For this latter condition, "when diagnosed with certainty," the writer recommends tracheotomy as early as possible. In whooping-cough there is usually some catarrh of the larynx and trachea, and bleeding from the mucous membrane is frequent. The appearance, during the course of whooping-cough, of ulcers in the larynx the writer regards as very suspicious of the onset of phthisis.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 8, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	590	244	31.28	14.96	16.83	4.93	4.42
Philadelphia.....	846,984	389	172	27.46	10.52	6.16	3.08	8.98
Brooklyn.....	566,689	285	137	28.70	11.70	15.05	1.05	5.25
Chicago.....	503,304	200	102	37.50	11.50	20.00	5.00	5.00
Boston.....	362,535	175	68	42.75	19.95	25.65	5.70	3.42
St. Louis.....	350,522	160	75	35.91	8.19	13.23	1.89	8.19
Baltimore.....	332,190	177	75	32.48	16.80	11.20	4.48	8.96
Cincinnati.....	255,708	67	26	11.84	13.32	7.40	2.96	—
New Orleans.....	216,140	109	36	33.01	11.92	4.59	.92	1.83
District of Columbia.....	177,638	78	40	26.88	23.04	14.08	2.56	1.28
Pittsburg.....(1883)	175,000	48	28	35.43	10.40	10.40	8.32	10.40
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	56	39	11.48	7.16	17.86	—	3.58
Providence.....(1883)	116,755	31	5	32.25	25.84	12.92	6.46	9.69
New Haven.....(1883)	73,000	24	12	8.32	8.32	4.16	4.16	—
Charleston.....	49,999	34	11	26.46	4.88	20.58	5.88	—
Nashville.....	43,461	22	12	22.73	22.73	22.73	—	—
Lowell.....	59,485	39	21	33.28	10.24	25.64	5.12	—
Worcester.....	58,295	20	8	25.00	20.00	15.00	5.00	—
Cambridge.....	52,740	22	9	35.36	9.09	22.72	4.56	9.09
Fall River.....	49,006	21	10	38.84	13.28	38.84	—	—
Lawrence.....	39,178	15	9	33.33	6.66	13.33	—	13.33
Lynn.....	38,284	11	3	45.45	9.09	18.18	18.18	—
Springfield.....	33,340	16	5	12.50	37.50	—	—	—
Salem.....	27,598	14	5	14.28	14.28	—	7.14	—
New Bedford.....	26,875	12	4	16.66	8.33	16.66	—	—
Somerville.....	24,985	6	2	83.33	—	50.00	16.66	—
Holyoke.....	21,851	10	7	40.00	10.00	30.00	—	—
Chelsea.....	21,785	14	3	—	14.28	—	—	—
Taunton.....	21,213	5	3	20.00	—	20.00	—	—
Gloucester.....	19,329	8	5	—	37.50	—	—	—
Haverhill.....	18,475	7	4	28.56	28.56	28.56	—	—
Newton.....	16,995	4	1	—	—	—	—	—
Brockton.....	13,608	—	—	—	—	—	—	—
Newburyport.....	13,537	7	2	28.56	14.28	28.56	—	—
Fitchburg.....	12,405	7	4	42.84	28.56	14.28	—	—
Malden.....	12,017	5	1	—	20.00	—	—	—
Seventeen Massachusetts towns....	135,707	55	16	18.18	12.73	12.73	1.82	—

Deaths reported 2773 (no report from Buffalo): under five years of age, 1204: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 826, diarrhoeal diseases 396, consumption 344, diphtheria and croup 139, lung diseases 133, typhoid fever 98, malarial fevers 57, scarlet fever 51, whooping-cough 37, cerebro-spinal meningitis 15, small-pox 12, measles nine, erysipelas six, puerperal fever five, typhus fever one. From *malarial fevers*, New Orleans 17, St. Louis 12, New York 11, Brooklyn nine, Chicago and Baltimore three each, Philadelphia two. From *scarlet fever*, Philadelphia 18, Baltimore seven, Chicago six, Brooklyn and St. Louis five each, New York and Boston two each, District of Columbia, Lowell, Worcester, Springfield, Waltham, and Woburn one each. From *whooping-cough*, New York eight, Brooklyn and District of Columbia six each, Chicago five, Philadelphia, New Orleans, and Pittsburgh three each, Boston two, Fitchburg one. From *cerebro-spinal meningitis*, New York four, Philadelphia two, Baltimore, Cincinnati, Providence, Lawrence, Lynn, Springfield, Salem, Holyoke, and Fitchburg one each. From *small-pox*, New Orleans eight, Philadelphia four. From *measles*, New York four, Philadelphia and Baltimore two each, St. Louis one. From *erysipelas*, Philadelphia four, Brooklyn and Baltimore one each. From *puerperal fever*, St. Louis two, Philadelphia, Chicago, and Somerville one each. From *typhus fever*, New York one.

Twelve cases of small-pox were reported in St. Louis; typhoid fever 56, diphtheria 18, scarlet fever 13, and measles one in Boston; scarlet fever nine, and diphtheria seven in Milwaukee.

In 36 cities and towns of Massachusetts, with an estimated population of 1,134,834 (estimated population of the State

1,922,530), the total death-rate for the week was 21.21 against 22.96 and 25.57 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending August 25th the death-rate was 19.1. Deaths reported 3149: diarrhoeal diseases 273, acute diseases of the respiratory organs 160, scarlet fever 115, measles 88, fever 59, whooping-cough 44, diphtheria 30, small-pox (Birmingham six, Liverpool two, London one) nine. The death-rates ranged from 12.9 in Huddersfield to 30.2 in Preston; Bradford 13.2; Birkenhead 15.3; Leicester 16.5; London 17.9; Nottingham 19.9; Birmingham 21.5; Leeds 21.7; Liverpool 23; Manchester 23.4; Newcastle-on-Tyne 27.6. In Edinburgh 15.7; Glasgow 25; Dublin 21.2.

For the week ending August 18th, in 167 German cities and towns, with an estimated population of 8,475,284, the death-rate was 24.7. Deaths reported 4029; under five years of age, 2219; consumption 485, lung diseases 374, diarrhoeal diseases 351, diphtheria and croup 155, scarlet fever 67, typhoid fever 65, whooping-cough 61, measles and röteln 58, puerperal fever 16, small-pox (Heilbronn two, Bamberg one) three. The death-rates ranged from 13 in Karlsruhe to 38.6 in Munich; Königsberg 27; Breslau 34.5; Dresden 25.2; Berlin 27; Leipzig 23; Hamburg 22.1; Cologne 22.4; Frankfurt a. M. 19.6; Strasburg —.

For the week ending August 25th, in the Swiss towns, there were 25 deaths from diarrhoeal diseases, consumption 14, lung diseases 12, measles four, diphtheria and croup three, whooping-cough one, typhoid fever one. The death-rates were at Geneva 16.4, Zurich 16, Basle 11.1; Berne 16.9.

The meteorological record for the week ending September 8th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Daily Mean.	Daily Maximum.	Daily Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sept., 1883.																			
Sun., 2	29.889	66	78.5	51	86	55	85	75	NE	E	SW	3	8	11	C	C	C	—	—
Mon., 3	29.944	60	67	50	68	43	66	59	NW	NW	NW	16	18	5	F	C	C	—	—
Tues., 4	29.074	58	71	44	63	42	81	62	NW	SW	SW	4	12	8	C	C	C	—	—
Wed., 5	29.979	64	75	56	86	35	54	58	S	W	W	10	8	9	R	F	C	—	—
Thurs., 6	30.125	61	76	48	66	23	73	54	SW	W	SW	8	16	11	C	C	C	—	—
Fri., 7	29.977	60	77	50	74	56	76	69	W	SE	SW	8	12	4	C	C	C	—	—
Sat., 8	30.003	59	77	50	74	56	76	93	W	SE	SW	8	12	4	C	C	C	—	—
Means, the week.	29.856	61	78.5	44				67.2										5.30	.03

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM SEPTEMBER 7, 1883, TO SEPTEMBER 14, 1883.

BANISTER, J. M., first lieutenant and assistant surgeon. Assigned to duty at Fort Adams, R. I. Paragraph 3, S. O. 170, Department of the East, September 10, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING SEPTEMBER 15, 1883.

BEARDSLEY, G. S., surgeon, and LIPPINCOTT, GEORGE C., passed assistant surgeon, detached from the Galena and placed on waiting orders.

PERCY, H. T., passed assistant surgeon, detached from the Naval Hospital, Norfolk, Va., and ordered to the U. S. S. Galena.

BRIGHT, GEORGE A., surgeon, detached from Naval Rendezvous at Philadelphia, Penn., on September 30th, and ordered to the Galena October 1st.

URQUHART, R. A., passed assistant surgeon, ordered to the Alert on October 6th, and on the arrival of that vessel at Yoko-

hama, Japan, to be detached, and to report for duty at the Naval Hospital at that place.

SIMONS, M. H., passed assistant surgeon, to be detached from the Naval Hospital, Yokohama, Japan, on the reporting of his relief, and ordered to the U. S. S. Alert.

AMERICAN ACADEMY OF MEDICINE. — The annual meeting of the Academy will be held at the New York Academy of Medicine, 12 West Thirty-First Street, New York, on Tuesday, October 9 (three o'clock P. M.), and Wednesday, October 10, 1883.

RICHARD J. DUNGLISON, Secretary.

BOOKS AND PAMPHLETS RECEIVED. — A Practical Treatise on the Medical and Surgical Uses of Electricity. Including Localized and General Faradization, Localized and Central Galvanization, Franklinization, Electrolysis, and Galvano-Cautery. By George M. Beard, A. M., M. D., and A. D. Rockwell, A. M., M. D. Fourth Edition. Revised by A. D. Rockwell, M. D. With nearly Two Hundred Illustrations. New York: William Wood & Co. 1883.

A Text-Book of General Pathological Anatomy and Pathogenesis. By Ernst Ziegler. Translated and Edited for English Students by Donald MacAlister, M. A., M. B. New York: William Wood & Co. 1883.

Original Articles.

CHANGES IN THE SYSTEM OF MEDICAL EDUCATION.¹

BY E. N. WHITTIER, M. D.,

Instructor in the Theory and Practice of Physic in the Harvard Medical School.

I DEEM it a rare privilege, Mr. President and Fellows of the Society, to be permitted to ask your attention to changes of great importance, already effected, or in process of adjustment, in the system of medical education.

I shall attain the high object I have in view, if I shall present clearly and concisely the defects of the old, the advantages of the new, and some of the causes contributing to the modifications noticeable in the scheme adopted by the most progressive of our modern schools.

It is not needful for the purposes of this paper that I should seek outside the limits of this Commonwealth material for illustration. In all that pertains to education, academic, technologic, collegiate, in law, in divinity, or in medicine, the Massachusetts standard is the highest.

The defects of the earlier schemes were most conspicuous in the lack of method in imparting instruction, in the absence of any effort well sustained and continuous through the whole time given to medical pupilage, and, in the control exerted over the students, by interests conflicting with medical education, during the months intervening and between the winter sessions; work preparatory for the lectures was in most instances wholly neglected or poorly directed; the embryo physician cast off at the end of the fourth month of intra-medical life, sought the farm, the work-shop, or the bench, or "plodded his weary way" through the mazes of anatomy, physiology, and chemistry in "regions remote, unfriendly, solitary, slow," or he again became the pupil of a physician already overtaken by business, and by that reason, even if generously qualified, but little inclined to act as preceptor.

It was a sign full of promise, where three years' study and attendance on two winter courses were prerequisites to an examination for the degree of doctor in medicine. Possession of two sets of tickets was deemed good and sufficient evidence of the one and the certificate of a physician in good standing of the other of these primary qualifications for a degree.

I need not remind you of the various methods adopted to evade these preliminary requirements; of the herding of classes, of professorial ambition better gratified by proceeds than by products, or by quantity rather than by quality of attendance; of the dread array of examiners, when ten minutes to each chair was an ordeal better qualified to evoke evidence of fullness from the presence of an as yet undigested mass of medical facts than to determine what was likely to be retained, digested, and absorbed.

¹ Read before the Massachusetts Medical Society, at its Annual Meeting, June, 1883. The following note is published at the request of the writer of the paper.

MASSACHUSETTS MEDICAL SOCIETY.

ROXBURY, July 7, 1883.

MY DEAR DOCTOR, — Your paper, read before the Society at its recent meeting, was, in accordance with custom, referred to experts.

The subject of the paper not being of the nature of those usually published by the Society, I regret to inform you that their verdict was not favorable for its publication. I herewith return the paper to you.

Very truly yours,

F. W. Goss, Recording Secretary.

DR. E. N. WHITTIER.

Under such conditions degrees must have been given more for what men were believed to be capable of acquiring, rather than for what they could have already acquired.

For instance, one of the most distinguished surgeons of modern times, whose name was a household word in this community two generations ago, had, to my knowledge among many others, as a pupil for three long years, one of whom he asked no questions, for whose advancement he made no effort to impart instruction. In a neighboring city I entered the office of a physician famed for his acquirements, widely known for his skill, of great ability, and possessed of a large and exacting practice. I left at the end of the first half year. I had been asked no questions, I had been given no instruction. I had my certificate and little else. Facts such as these, old to the oldest, but new to the youngest here present, controlled the educational efforts of fifty, thirty, and even twenty years ago.

The strongest influences antagonizing the system of medical pupilage as it formerly existed were the very defects alluded to. The founders of the Tremont Medical School determined upon a course of study in large degree supplementary to, but in a larger and more important sense essentially a part of, the winter session. Individual medical instruction became almost an impossibility, for the best medical talent of the community arrayed itself at once by the side of coöperative medical education, the custom of medical apprenticeship was quickly and practically ended, and the gracious influences continued to increase, in power and effect, forcing by their own intrinsic merit the union of the summer and winter sessions, the blending of conflicting interests into harmonious and well-directed efforts continuous throughout the academic year, and perfected a scheme "to carry the student progressively and systematically from one subject to another in a just and natural order." The advantages of the continuous course in the newer system of medical instruction, have fully justified the sound judgment of the promoters of the scheme.

Broken, disjointed, and fragmentary efforts must of necessity give but imperfect results. The study of the various branches of medicine, entered upon with a high appreciation of the value of a systematized and carefully planned scheme, whose various elements are judiciously and logically arranged, must needs be followed by the highest attainment, and the best preparation for an honorable and useful career.

Division into classes, rigid scrutiny of individual members, restriction to the work assigned to the class for the year, and examinations conducted with the utmost fairness, and adjusted in accordance with the experience of the examiner to the capacity of men of average intelligence, are the salient features of the plan now adopted.

The value of the habits of study, and of the mental discipline acquired by men of collegiate education, is nowhere seen to greater advantage than in the classes composing the medical school of to-day; and the relative increase in the number of men who, by their scholarly habits, easily reach the highest grade as medical students is particularly noticed in the matter of hospital appointments, into which of necessity to a considerable degree scholarship now enters. The present difficulty is not to find a sufficient number of good men well prepared, but to select out of the very large

number of desirable men those best qualified for these honorable positions.

Competition, which in medicine now begins with its study, and in the matter of these appointments is sharp from the outset, is thus felt through the whole of a medical student's life, and the immediate goal of his ambition, a hospital appointment, is with good reason believed to be dependent in large measure upon good work in the school. The rapid growth of our hospitals, calling for corresponding increase in the number of undergraduate appointments, offers advantages of the largest practical value to the students. The lengthening of the term of service in the Boston City and Massachusetts General Hospitals to eighteen months, considered with reference to the class of men appointed, may impair in no small degree the success of the fourth year course, so long as it remains optional; for the hospitals must always be regarded as dangerous competitors for the time of the very desirable grade of students able and wishing to extend their studies beyond the three years now prescribed, and hospital experience will always be found in the opinion of undergraduates to outweigh the advantages of the instruction in the special and general subjects assigned to the fourth year. But at the present time no convincing argument can be offered for a more intimate relation between the school and the hospitals. Practically, and through the courtesy of the hospital management, all the material desirable for instruction while in the control of the hospital authorities is freely at the disposal of the Board of Instruction. It is not from lack of material, nor through any obstacles created by hospital authorities, that a large percentage of the cases in indoor and out-door service fails to be of value for the purposes of medical instruction. Nor can it be said that the subjects themselves are unwilling. The more intelligent, and because of their greater intelligence the more desirable patients, are the quickest to appreciate and to avail themselves of the great personal advantages arising from the most critical analyses of their various diseases. At no time are such examinations carried to a greater degree of excellence than during the hours devoted to clinical instruction. The supply of material for all branches of practical surgery and medicine, and for most of the special branches, is in excess of the demand, and is increasing rather than diminishing; and through the intelligent and cordial efforts of the able executive officer of the Massachusetts General Hospital, Dr. Whittemore, a new out-patient building has been so planned as to quadruple the conveniences and opportunities of the old, and to place clinical advantages of the most desirable character more directly than ever before, essentially at the disposal of the school.

An important question bearing upon the relative value of the instruction given by hospital physicians and surgeons here suggests itself.

It is not true that the men having control of the largest amount of clinical material are, by reason of this or any other single fact, the best teachers, nor can it be said that the best teachers are constantly so situated that they can control and select cases such as shall be suitable for illustration of the subjects they desire to demonstrate, and the defect bids fair to be perpetuated; for there are no indications of a change from the present system of a few months on duty and many months off to what is known as the continuous service.

It will be a fortunate day for the cause of medical

instruction when the gentlemen prominently connected with the clinical departments of the school shall have an opportunity to follow, in a regular and systematic manner, the didactic exercises, or when, in harmony with a properly controlled and previously arranged plan, cases can be presented which shall demonstrate clinically the important facts illustrated in the lectures, and at the same time reinforced by text-book instruction.

Yet the advantages are not wholly on the side of the new system, for while the tendency of the present day is strong in the direction of conscious, systematized, and selected knowledge, it leads the student too far from the realm of practical knowledge and applied power. It may with some show of reason be claimed that the error is not in the scheme so much as it is in the limitations placed upon its development by the short time given it by the student. Yet it is true that "the ancient and serious diligence of Sydenham," by which he achieved so much, his master principle in practice and in thought, has given place to the study of essence and of cause, of structure more than of function, of the varying phenomena rather than of the natural progress of disease, and thus the need of cultivating the powers of observation and the art of medicine is lost sight of in the desire to impart the largest possible knowledge of the science of medicine.

The older system permitted the more immediate, the newer system adopts the mediate, cognizance of disease, and is inclined to reject as of too little value the governing principle of the old, that it is by their own eyes, and their own ears, and their own minds that students must observe, and learn, and profit.

In his grateful tribute to the memory of his old master, Dr. Holyoke, whose name appears as the first among the incorporators of this Society, Dr. James Jackson wrote, "After a time he allowed me to walk with him, and to see his patients." Dr. Latham checked his pupils on the threshold of St. Bartholomew's, saying, "In entering this place, even this vast hospital, where there is many a significant, many a wonderful thing, you shall take me along with you, and I shall be your guide."

The strength of the old method was in this intimate relation between master and pupil, and any violation of this governing principle in medical instruction will impair the power of the new system. But there will be found on careful inspection a marvelous increase in the facilities afforded students in that they are placed as never before in direct immediate contact with cases assigned them for their instruction, and while the master and pupil may not now as formerly walk side by side, in a better and more important sense they walk hand in hand in their allotted and chosen studies.

From a somewhat extended opportunity for observing the influences exerted and the results attained by the systems adopted for the instruction of medical students, I may lay claim to the privilege of presenting and of discussing some of the features of the more advanced methods.

The aim of the best school is not to graduate large classes fairly fitted for the active duties of professional life, but classes, whether they be large or small, eminently qualified for the practice of the art of medicine, and in the present advanced and rapidly advancing condition of the knowledge which it is useful to impart to undergraduates, two methods of solving the vexed question, how to compress the needed knowl-

edge into the short time to be allotted to its acquirement, present themselves. One plan, as yet *sub judice*, extending the time to four years, and another, the discussion of which has already begun, is to include in the preliminaries such knowledge of anatomy, chemistry, and physiology that men shall be fitted for immediate practical work in the laboratory and at the dissecting table. In this way didactic exercises and text-book instruction could in great part be finished during the second year, and the third-year students, having already acquired the requisite knowledge of theoretical and scientific branches needful for the purpose, could be assigned exercises, and be frequently examined on subjects more intimately associated with the art and practice of medicine; for though in all that pertains to the science of medicine graduates of to-day are wonderfully proficient, yet it is evident that under the present crowded condition of the third year, and from the scanty time allotted to clinical exercises, limitations are placed upon the best results, and these limitations are so great that comparatively few undergraduates have acquired adequate knowledge of the art of observation, or have been sufficiently drilled in the application to the practice of medicine, of its science and theory.

In clinical exercises the student has his only opportunity of proving, and the professor his best method of testing, the theoretical and practical value of the instruction imparted. Unfortunately for the best interests of the students these exercises are associated with so much that should precede, and, in the latter part of the year, with the pernicious process of "cramming" for the final examinations, that great difficulty is experienced in getting the men most needing clinical instruction sufficiently well to the front so that they are brought immediately under the supervision of the instructor. This difficulty is, however, likely to be removed by the rapidly increasing tendency to divide and subdivide the class into sections, and to thus bring individual students more directly and more frequently in contact with patient and instructor.

The effect of close proximity, quick questioning, and ready response, the breaking down of barriers thrown up in class work, and the substitution for these hindrances of many familiar aids, the influence which a judicious instructor can exert in the direction of implied coöperation and interdependence, the exercise of the power which lifts the work of the hour up to the level of the student's ideal, and carries straight home to his heart and understanding a vivid, realizing sense of the importance of his work, these are a few of the many advantages which division into sections has over the old method of class exercise for the detail or for the routine of clinical instruction.

It is not sufficient for the best results of a clinical exercise that it should rest with the announcement of the diagnosis, and yet it too frequently happens, from a defective application of the rules for conducting the exercise, from the limitations placed upon the time to be given the case, or from other and not easily controlled conditions, that but little or no time is given to the consideration of the other and very important element, the treatment, "for the observation which does not teach the art of healing is not that of a physician, it is that of a naturalist," and one of the strongest claims to the success attained by the new system should be that it teaches men more and better things of the art of healing.

Again, if it be that students are better prepared than formerly by their more extended preliminary education to grasp and comprehend both the difference and agreement in symptoms, the instructor ought to work in a manner not possible under the older system, for devices not applicable formerly, from lack of suitable material or from the want of the present conveniences, can now be constantly employed.

Among these devices none deserves higher rank than the use of the blackboard, and no clinical exercise can be held to be complete in which this important aid is unemployed, for by this the instructor appeals to both the sight and hearing of his class, and places plainly before them in such way that it need not escape the observation of the most superficial the various stages and steps of the mental process pursued by accomplished clinicians in their passage through the labyrinth of rational and physical signs out into the region of diagnosis and treatment. For instance, the use of the blackboard enables the instructor to so collect and display the rational and physical signs that no material fact can escape or be forgotten, to so present the arrangement or grouping of symptoms that the points of agreement or difference can be more readily seen, to adopt the systematic and logical placing of symptoms by employing the device of juxtaposition ("for orderly juxtaposition is requisite in matters of complexity") so that both agreement and difference in the value of signs are made plainer, and to sum up the case by the constant, undistracted iteration and reiteration of the points of agreement.

For instance, the history of a case when written on the black-board should present the signs or symptoms in the order in which they were given by the patient, and whether this order be systematically, chronologically, or logically correct or not, it should be written down as given.

Then the various signs should be rewritten or renumbered, so that the points of agreement or difference can be more plainly seen, and at the same time so grouped that those signs which by proximity impart value to each other and strengthen the group, as suggestive of some disease or of kindred diseases, are placed (by employing the device of juxtaposition) side by side.

The final stage is entered upon, in the effort made by the instructor to increase the diagnostic value of the group of signs, by iteration and reiteration of the points of agreement undistracted by any allusion to the points of difference.

And I believe that these are the most prominent and promising of the methods now employed to impart requisite knowledge of the value, when applied to individual cases, of the great general truths of the art of medicine.

It is not profitable in the limited time assigned this paper to present more than a brief sketch or to touch upon more than one of the various branches of medical education in which marked advances have been made.

The illustration which I shall employ may serve to show that the proper study of the art of medicine includes that of the art of observation, and that the greater worth of the new system resides in the fact that by this method, better than in any other way, students are taught how they can best employ the knowledge they possess; that it gives them safe rules for the analysis of cases, so that at the time, for the time, and in the time at their disposal they can give an immediate value

to the efforts they may make for the relief of their patients; that it teaches men the great advantage of systematized thought, and enables them to apply to diagnosis and treatment a method which shall add to their equipment yet another thoroughly tested instrument of precision. The intent of the system is that the early part of the year is to be employed by the instructor in teaching his class, by his examinations of patients, the rules they should adopt in their examinations, and in the remaining part of the year the exercises are to be conducted by the students under the supervision of the instructor, who holds the student closely to the use of the rules which long experience and many trials have proved to be best calculated to apply to his theoretical and scientific knowledge the most satisfactory test of its real worth.

Briefly stated the method is this: The rational signs, including heredity, age, sex, occupation, mode of living, hygienic influences, locality, previous illnesses, history of present illness, and all that may be learned by questioning (and in this the art of a skilled examiner is plainly set forth), are written on the blackboard, in the presence of the class, and, if need be, carefully rearranged or numbered according to the relative importance of the signs; then the diseases, of which these rational signs are suggestive, are placed in such order, or so grouped, that they are given position in the order of their values. The same course is followed with the physical signs, and, last of all, the conjoint use of rational and physical signs is employed for the purposes of elimination, diagnosis, and treatment.

It has been my very good fortune for a number of years to be so placed that I could follow a considerable number of the exercises in clinical medicine under Professor Ellis, and since his deplored illness many of the exercises in this department of instruction under Professor Minot.

The illustration which I have already alluded to, and have placed on the screen, is wholly, in all its particulars and details of arrangement, a transcript from the note-book of a third year student, his copy of an exercise conducted and written on the black-board in the presence of the class by one of his classmates.

Let us for a moment consider the circumstances under which this exercise was begun.

A woman brought her child to the Out-Patient Department of the Massachusetts General Hospital seeking relief. She was taken into the amphitheatre, where the third class had already assembled, and one of their number was called down from the seats and told that the case was his to examine, governing himself by rules with which he was believed to be familiar. The defective intelligence of the mother and the extreme youth of the child offered many obstacles to securing a satisfactory history of the case. But upon these meagre facts, gained only after much and careful questioning, he based his work. How well he did it is best shown by the fact that one of his classmates, intelligent and observing, obtained for his note-book, and possibly for future use, this outline of the case, and I place it before you just as it was handed to me:—

MEDICAL CLINIC, FEBRUARY 21, 1883.

History. { Girl, age six years. Family history good; previous history good; five weeks ago noticed cough, with pain in left arm (?) and region of stomach; feverish; scanty-muco-purulent expectoration; violent action of heart; loss of flesh and color; appetite poor; no diarrhoea; no vomiting; no evidence of shortness of breath (?); was in bed two weeks; no constipation; does not sleep well; urine negative.

RATIONAL SIGNS.

Cough.	} Acute.	Thoracic.	{ (1.) Pulmonary. (2.) Cardiac. (3.) Pleural.
Pain in left side.			
Muco-purulent expectoration.			
Violent action of heart.			
Fever.			
Epigastric pulsation.			
(1.) Pulmonary.	{ Catarrhal pneumonia. Croupous pneumonia. Capillary bronchitis. Bronchitis.	{ General. Circumscribed.	
(2.) Cardiac.	{ Congenital. Eliminated by history. Acquired. { Endocarditis. Myocarditis. Pericarditis. { With effusion. Without effusion.		
(3.) Pleural.	{ Acute pleuritis. { With effusion. Empyema. { Without effusion.		

PHYSICAL EXAMINATION. (SIGNS.)

Inspection.	Pallor.	{ Right side larger than left. Left side deficient in motion and contracted. Intercostal spaces on left side not seen.
	Emaciation.	
{ Of back.	Lack of symmetry.	{ Congenital pleurisy of left side. Old pleurisy of right side.
{ Of front.	Contraction of left side not so marked.	{
	Pulsation at right nipple { R. auricle. R. ventricle.	
Lateral curvature to right side.	{ If dependent on pleurisy curvature would probably have been towards left side.	
Palpation.	{ Vocal fremitus absent on left side. Apex beat felt in fourth intercostal space near right nipple.	
Percussion (back).	Left side flat.	
Auscultation (back).	Left. Respiration absent at base. Broncho-vesicular at top.	{ Broncho-vesicular throughout.
	Right.	
Diagnosis.	{ Fluid in left pleural cavity; and because of the tendency to purulent effusions in children, and the delicate condition of the child in question, probably purulent or sero-purulent rather than a serous effusion.	

The occasion was one of many opportunities seized by the instructor to test the quality and the quantity of the knowledge of clinical medicine possessed by the student, and to determine whether or not that knowledge was so classified and catalogued that it was available for the purposes of, and in the time allotted to, this exercise, and although it may seem to some that a better plan could have been adopted for the proving of this paper (for the demonstration is defective in many important particulars), and that I should have procured for you an example elaborated, worked out in detail, and finished in all its parts by an instructor, I have chosen rather to rest my case upon the unimpeachable testimony of the instructed; to place before you the work of the pupil, in which, nevertheless, without doubt and without difficulty, you may trace the hand of the professor, and because I am no longer dealing with the means by which this result has been obtained, but with the result itself.

I have the honor to submit, for your inspection and criticism, this work of a third year student, with a high appreciation of the favorable judgment which awaits it, for it is a competent and willing though not too swift witness of an advance in the system of imparting medical knowledge through recent changes in the methods of medical instruction.

— A correspondent writing to a contemporary makes the astonishing statement that he was told by an older practitioner that it was always the latter's habit to destroy monstrosities. The correspondent having had in his practice two acephalous monsters writes to know what his moral and "ethical" duties are in the premises.

THREE OBSTETRICAL CASES COMPLICATED I. BY ALBUMINURIA; II. BY ERYSIPELAS; III. BY ECLAMPSIA AND SEPTICÆMIA.¹

BY C. M. JONES, M. D.

AMONG the perils which beset the lying-in woman eclampsia and septicæmia are probably the gravest. The symptoms which point to these complications are the source of the greatest anxiety to the physician, and no study of them can be too careful. I purpose, therefore, to group together to-night three widely different obstetric cases, not for their rarity, but because they will serve to bring out points of prognosis and treatment which, in my judgment, are sometimes too little considered. The first two will illustrate how the apprehension of these two complications may be dissipated by the course of events, while in the third the life of the patient was twice jeopardized by the successive appearance of each.

CASE I. Albuminuria. January 8, 1879. Mrs. U., primipara, age eighteen, short and stout. History of general good health till about three weeks ago, when she noticed swelling of the feet, which has continued to increase up to date. The legs are enormously distended, so that she can scarcely bend the knees, and the abdomen is in a corresponding condition. Face somewhat puffy. Has suffered much of late from nausea and frontal headache, and the urine has been scanty. She has, however, kept on her feet up to the last moment. Labor pains began at two o'clock P. M., and I first saw her at eight P. M., and found the condition as above described. The bowels had been moved during the day with oil. The head was presenting O. L. A., and the os was soft, dilatable, already the size of a quarter; pains not severe or frequent. A little urine was secured, and examination showed specific gravity 1010, albumen one and one half per cent., hyaline and granular casts. There seemed to me at the time no sufficient reason for active interference, and the case was left in charge of a medical student, Mr., now Dr., Comey, who did not call me until morning. The progress had been slow without any unusual symptoms. The os had been for some time fully dilated, but the head was not advancing. I therefore ruptured the membranes at nine o'clock A. M., January 4th, and a female child was born at 11.30 A. M. The placenta was delivered fifteen minutes later, the uterus contracted well, and there was no untoward symptom. The night after delivery she began to pass water freely. There were 2650 cc. in twenty-four hours, having the same characteristics as before. The free diuresis continued for a fortnight, sometimes reaching 3000 cc. in a day. The albumen and casts gradually diminished. She also had considerable diarrhœa. The cedema diminished with surprising rapidity, and at the end of the fortnight had entirely disappeared.

February 1st. Was able to do her housework.

February 7th. Urine, specific gravity 1013; albumen, a trace; urea normal; very few granular casts.

February 16th. Six weeks after delivery. Urine, specific gravity 1013; albumen absent; slight sediment; no casts; small amount of pus.

This patient had absolutely no medicinal treatment until she began tr. mur. fer. two weeks after delivery. I purposed to give her diuretics, but, fortunately, took

the precaution first to measure the urine of twenty-four hours. Otherwise the medicine would have received the credit which belonged to nature alone.

Albuminuria in pregnant women is not infrequent, but it is exceptional to find so extensive cedema as was seen in this patient. All the ante-partum symptoms, the cedema of feet and face, the nausea, the headache, and the scanty urine, were such as to give rise to the liveliest apprehension of convulsions. I have known forcible delivery to be recommended and carried out with less of reason than here existed, and that, too, in a multipara, where the probability of convulsions is by no means as great as in a primipara. Had such a procedure been undertaken in this case the good result would have been proclaimed as sufficient justification. But such a result following a masterly inactivity, which to be sure is lacking in brilliant effect, makes enormous the responsibility of inducing premature labor in similar cases, and especially so when the viability of the child is not fully assured, for this result is not exceptional. A large proportion of cases of albuminuria when let alone escape the apprehended danger, and if this were otherwise we are not sure of exemption even after operation. In a very considerable number of cases in which convulsions occur they continue or first develop themselves after the uterus is emptied. For these reasons, therefore, the policy which in a vigorous patient leads to active interference on account of the mere apprehension of possible complications seems to me of doubtful propriety.

CASE II. Facial erysipelas beginning on the day of confinement. December 20, 1882, I was called to see Mrs. M., primipara, age twenty-one, who was now eight months pregnant. Health had been good till two days before, when, after exposure, she began to complain of her throat. She had had a chill, was now very feverish; respiration 120, rather weak; temperature 102° F. There was severe inflammation of the throat and tonsils, and on the latter were scattered patches of ulceration. Tongue had a heavy brown coat. There was nothing to indicate that labor was impending, but the next forenoon, December 21st, I was summoned, labor pains having begun at eight A. M. A feeble, evidently premature child was born at four P. M. The throat was better during the day. The pulse during the labor was of normal strength and frequency, and no unusual incident occurred except that my attention was called to a little swelling of the nose. I made no special examination of it in the darkened room, but the next day the swelling had increased, become livid in color, and painful. She had headache; pulse 100; temperature 102.2° F.; tongue as before. I need not give the record day by day, suffice it to say that the inflammation extended itself over both cheeks and the forehead, a part of the time both eyes being completely closed. The temperature in seven days came gradually to normal, the initial temperature having been the highest. The pulse after the delivery never exceeded 100. There was no abdominal disturbance. The lochia were scanty, a part of the time offensive. The milk secretion was established on the fourth day. There was no sign of the septicæmia which might have been considered probable, and in ten days she was sitting up as well as if her puerperium had been attended by no untoward condition, although her face was still much disfigured by the obstinacy of the swelling and some broken places on the affected skin.

¹ Read before the Boston Society for Medical Observation, June 18, 1883.

The weak infant died on the fourteenth day.

The treatment ordered in this case was not fully carried out. She could not afford the price of a training-school nurse, but had to rely on the well-meant, though often unintelligent, offices of friends. The lying-in room, however, was large, at least fifteen feet square, with windows on two sides, and good ventilation was secured. The room generally was rather cold, for she preferred blankets to continuous fire. The chilliness of the air gave her no discomfort or inconvenience. She had acetate of lead for the face, took medium doses of quinine, and a moderate amount of stimulants. She was bathed with carbolyzed water, but did not use carbolic injections.

Considering the general teaching in regard to erysipelas in connection with the lying-in room, it was remarkable that at no time should there have been any drawbacks. I think, however, that this case is but one example of a condition sufficiently common, and that erysipelas and the puerperal state quite often coexist without disastrous consequences. I report the case simply to emphasize this fact, which is often lost sight of in preliminary teaching and medical discussion. The usual statements are undoubtedly true of *phlegmonous erysipelas*, a limitation which is not generally explicitly made. But as regards the association or contact of *simple erysipelas* with the puerperal state, my reading, and observation, and experience alike lead to the conclusion that the dangers have been decidedly over-stated.

CASE III. *Eclampsia and Septicæmia*. April 5, 1883. Mrs. S., age twenty-three, primipara, began to have labor pains at four P. M. I saw her for the first time at 7.30 P. M. She reported that her health had been always robust, and she had been well throughout her pregnancy except that her feet had been swollen for a month past. At the present time the œdema is extensive, involving feet and legs, and the lower part of the abdomen also. The face is pale and puffy. Nothing definite was ascertained in regard to the urine. Her bowels were opened to-day with medicine. On examination the cervix was found thick, soft, and dilatable, pervious to one finger, the head presenting high up O. L. P. At eleven P. M. the cervix was thin, and the os as large as a quarter, the pains severe, and recurring every ten minutes, and she complained of nothing else. April 6th, at 1.30 A. M., I was suddenly called from the adjoining chamber to find her on her face in a violent convulsion, which lasted at least ten minutes. A second followed at 1.50, and a third at 2.10, of shorter duration; nor was there during the intervals any recovery of consciousness. The patient lay in a comatose state, with stertorous breathing, until the twitching of the mouth and the turning of the eyes ushered in the next attack, although the lividity of the face and lips following the tonic spasm partially disappeared in each interval.

In consultation with Dr. Disbrow I applied the forceps high up without ether, the os being now about the size of a half dollar. The forceps were hardly locked when, at 2.25, came another convulsion, which, fortunately, was of short duration. The traction was laborious, and a good-sized male child was delivered at 2.35 in a state of profound asphyxia. The placenta was expressed ten minutes later, the hæmorrhage was moderate, and the uterus contracted well. The only medicine she had had thus far was pot. brom., which she had swallowed in the intervals between the con-

vulsions. Without recovering consciousness she had a fifth attack at 3.05, and a sixth at 3.50. Between the convulsions the restlessness now became extreme. She was flinging herself bodily about the bed, tossing her arms and feet constantly. It was necessary to hobble hands and feet, and to use force to keep her on the bed. The skin was dry, the face turgid and cyanotic, the pulse soft and compressible, about 115. About an ounce of urine was drawn by the catheter, and became nearly solid with albumen on boiling. In consultation with Dr. W. L. Richardson it was decided that the indications were against venesection. At 4.30 she had a seventh convulsion. At 4.50 she took by mouth chloral, 1, pot. brom., 2, and soon after pilocarp. nit., .01. At five had her eighth convulsion. At 5.20 pilocarp., .01, which was repeated at 5.40. Convulsion at 5.45. At six chloral and pot. brom. repeated. About seven began free perspiration about the body, with moderate salivation, and this continued about two hours. Tenth convulsion at seven. Chloral and bromide at eight. Eleventh convulsion at 8.25, twelfth at 9.10, thirteenth at 10.30. The only favorable symptom thus far was the gradually lengthening intervals between the attacks. It was an uninterrupted succession of convulsion, coma, jactitation, and convulsion again, and the jactitation was to the sight quite as distressing as the convulsion itself. The tongue was badly bitten and bleeding. The face was dark. The pulse was growing weaker, and the case seemed utterly hopeless. With the catheter 150 grammes of high-colored urine was obtained at eleven A. M., loaded with albumen, and containing abundant granular and hyaline casts. At 11.50 fourteenth convulsion, at one P. M. fifteenth, and sixteenth at 2.10. During the afternoon all the unfavorable symptoms continued. The pulse reached 160, at times was almost imperceptible. The extremities became cold and clammy. She had taken during the day chloral, 6, and more than twice as much pot. brom., mostly by mouth, a little by the rectum, also three subcutaneous injections of morphia, .03 each, which gave each time about fifteen minutes of rest. She had also swallowed a small amount of gin. She had inhaled occasionally a little ether when the convulsion was imminent, but without any immediate effect. Later in the afternoon the pulse gained a little in strength, and warmth returned to the extremities, but at five P. M. occurred one more convulsion, the seventeenth and the last. About six P. M. 180 cc. of urine were obtained.

During the next night, the 6th, the restlessness continued almost unabated. It required two men to keep her on the bed. She took regularly pot. brom., 2, tr. hyoscyam., 4, every two or three hours. She passed water several times during the night involuntarily, and did not again require the catheter. She made a little gain in strength of pulse the next day, and became gradually quieter. She was fed with milk and beef tea and gin during the day, and in the afternoon began to open her eyes less wildly, though she showed no sign of dawning consciousness till towards evening, when she tried to respond to a question. She was unconscious for forty hours.

April 7th. Bowels have moved spontaneously in bed, and she has continued to pass water involuntarily. The nurse says the amount of urine must be considerable. The patient is uneasy, dull of comprehension, but complains of soreness of tongue, which has been badly chewed, of headache, and of violent

pain in the right arm, which was probably injured in the tossing.

April 8th. Temperature normal. Still restless.

April 9th. Temperature 100° F. Pain in abdomen. Lochia scanty. Temperature p. m. 101° F. Pulse 120. No sign of milk. Hot fomentations, warm injections, and quinine, .50, daily. Takes milk and gin regularly.

April 10th. Temperature a. m. 104° F.; p. m. 103° F. Pulse 125. Free from abdominal pain. Lochia still scanty. Nights still quite restless. Pain of arm so severe as to require opiate. Micturition under control. Bowels loose.

April 13th. Pulse 105. Temperature 101° F. Gradual improvement. Pain of arm diminishing. Takes liquid nourishment quite freely. Tongue still swelled, ragged, and somewhat painful. Headache still troublesome, though less severe. No secretion of milk. Urine, specific gravity 1015; albumen, one per cent.; numerous granular and hyaline casts.

April 17th. Pulse 100. Temperature 100° F. Has continued to improve slowly until to-day, and everything seems favorable to her speedy recovery. The urine is abundant, still containing albumen, one per cent., with casts as before. On this date she was carried from the South to the West End. I saw her again on the 21st. She was doing well, taking liquid nourishment quite freely, though still in bed, with temperature 100° F., pulse 90, and very anæmic.

April 26th I was summoned, and found her with temperature 103° F., pulse 115, making no special complaint. Anæmia very marked. No appetite. Tongue sore and swollen from the biting, with a dry, brown coat. No abdominal pain or vaginal discharge. Bowels costive. She was ordered quinine, 1, daily with stimulants.

April 28th. Temperature 104° F. No change.

April 29th. Temperature a. m. 104.3° F.; p. m. 103° F.

April 30th. Temperature 103.4° F. Severe pain in the right chest, but nothing abnormal on auscultation. Tongue clearing. Pulse more steady, and of fair strength.

May 3d. There has been little variation of fever or other symptoms. The pain in the side has continued severe. No cough or expectoration at any time. No abdominal pain. Much emaciated. Bowels moved only with cathartics. Fine moist râles over the right lower lobe with slight dullness. Urine, specific gravity 1025; albumen, one per cent.; hyaline and granular casts. Daily quantity from 1200 to 1500 cc.

May 5th. Temperature 102° F. Pulse 90, stronger. Tongue nearly clean. No cough. Fine moist râles still heard, though in diminished numbers.

May 6th. Temperature normal. Pain in chest almost gone. Tongue clean and nearly well. Nothing found in chest.

From this time forward convalescence has been uninterrupted. The anæmia has been profound, but she is gaining in this respect. The urine was still albuminous June 4th, had specific gravity 1023, and no casts. June 11th she resumed her housework.

In regard to the infant, it did not seem possible to revive him from the asphyxiated condition in which he was delivered. It was at least a half hour before stimulation, friction, and steady artificial respiration were rewarded with an occasional inspiration, and these procedures were continued without a minute's interruption for more than two hours, when a shallow, feeble

breathing was established, and it seemed safe to leave him for a little while. The breathing subsequently improved. He was dressed about sixteen hours after delivery, though the respiration was still exceedingly shallow, and his existence precarious. He was carefully fed with the spoon. It was three weeks before he uttered a voluntary cry, or was able to nurse the bottle. He is now as strong and lively as any child, and a good example of what perseverance may sometimes accomplish under the most discouraging circumstances.

In conclusion I may say that I am not altogether satisfied with the effect of the treatment of eclampsia in this case. I am at least sure the treatment did no harm. Had we performed venesection I could not have said this with such emphasis, for when I see the profound anæmia which remains I am convinced that she had not a drop of blood to spare.

As to the pilocarpine, it accomplished its immediate purpose without the supervention of any dangerous symptoms. After the perspiration was once started the dryness of the skin did not again return. If the transudation had been excessive, occurring, as it must, into the lungs, as well as through the skin and salivary glands, it is easy to see that there might be, in a comatose state, danger of drowning a patient in her own serum. She should at least be able to cough if this drug is to be pushed. Her improvement, however, did not begin for some hours after the active effects of the drug had passed off.

Ether was not used to an extent to make it an important factor in the result. She was unconscious from the onset of the first convulsion, and was at no time thoroughly etherized. She had a little ether repeatedly when the spasm was threatening, but it did not act quickly enough to do much good. Chloroform would be far better to check the immediate attack.

In another case I should be inclined, in addition to the chloral and bromide, to give morphine more boldly, for it was this drug alone which seemed to give even a brief respite.

INFANTILE URETHRAL STRICTURE.

BY JAMES O. WHITNEY, M. D., PAWTUCKET, R. I.

In all cases the inner layer of the prepuce is adherent at birth to the glans penis; the organ has an *inelastic* cap; beside, in some cases, the frænum is too short; in these conditions erections are painful as one result, and hence, also, the stricture, and all the phenomena of so-called phimosis, as straining, being constantly wet, hernia, weak gait, palsy of legs, convulsions, fretting, crying, restlessness at night, and so on to the end of a long list, and these begin, in many cases, from the first urination. While the penis is pendant all is comfortable, but urine in the bladder induces the erection, the child frets or even screams out, finally voids its urine, and all is quiet again. This inelastic cap on the glans prevents full erection, a short frænum turns the organ downward, and comfortable urination cannot take place — *for there is a stricture*. The remedy: Have the child firmly held so that it cannot flex its thighs; grasp the penis with left forefinger and thumb, an oiled probe in the right hand; push back the prepuce and sweep off the adherent layer from the glans, leaving not part as at first; carry the foreskin behind the corona; with oil clear off the smegma; oil freely, and

bring the foreskin into normal position, — all this can be properly done in half a minute. Lead lotion if inflammation follows. Very great relief takes place at once as to urination. If the nurse will inject daily a few drops of sweet oil well up into the prepuce all tightness of the inner layer permanently disappears, and nothing further is required, unless to snip the frænum, if too short. If the foreskin is long a drop of urine is retained and irritation is set up. These cases call for circumcision, which it is not proposed to describe.

This adhesion to the glans is not pathological; not a globule of blood need be lost in the separation. If the foreskin is injured, phimosis may follow, but there is no phimosis in this matter, for the prepuce can always be strained over the glans as the probe sweeps the gluing, with little or no trouble. Use ether if patient is nervous, or desired for any reason.

The desideratum in the matter is to secure painless urination, which cannot exist while anything prevents complete erection of the penis; the adherent inner layer is inelastic like a silk hood over the parts; a short frænum prevents a direct current of the urine; these two conditions must be fully relieved. In children with poor digestion the urine is acid, which aids on the troubles. I never saw infantile hernia arise from any other cause than the straining from this form of urethral stricture; cure it early and a truss is not called for. This paper is not intended to cover the topic, but to correct what seems to the writer erroneous views as to the prime factors. The tegument is never at fault, the inner layer always; separate and soften it — I have used glycerine in place of oil, — cut back the frænum, and if this simple thing is not satisfactory, circumcise.

TWO CASES IN PRACTICE: (I.) ANOMALOUS MENSTRUAL SYMPTOMS WITH ATROPHY OF THE UTERUS; (II.) MENORRHAGIA AND CHRONIC DYSPEPSIA OF TWO YEARS' STANDING CURED BY DILATATION OF THE CERVIX UTERI.

BY JOHN W. FARLOW, M. D.

I.

MRS. S., aged twenty-eight, has been married eight years. Before marriage the catamenia were regular, lasting three days, the flow scanty and painless. She has never had a child, but seven years ago she had two miscarriages, each time at about three months, the result, she thinks, of falls.

After the last miscarriage the catamenia appeared irregularly for several months, and then stopped altogether. So that for nearly seven years there has been no menstruation in the sense of a discharge of blood from the uterus. In place of this, however, every month, with great regularity, the left breast swells, becomes full, tense, and painful. This condition lasts about a week, and then gradually disappears. No change takes place in the right breast, and there are no symptoms referable to the pelvis.

I saw her toward the end of a monthly period. The right breast was normal, but the left was twice its normal size, prominent, hard, with large blue veins on its surface, painful to the touch; in fact, it had every appearance of a beginning mammary abscess.

The uterus was in normal position, flabby, small, the sound entering only two inches. The vagina was also atrophied.

It is interesting to notice the long continuance and regularity of the swelling of the breast, and also the entire absence of hæmorrhage from the nipple or the mucous membranes which usually serve as points of exit for the blood under such circumstances.

II.

MRS. C., aged forty-two, had always been a strong woman. Her menstruation in early life had been regular and painless. She was married at the age of twenty-four, but has had no children. She has miscarried six times, the first time with the aid of a "doctor," who showed her how to introduce a long-nozzled syringe into the uterus and rupture the membranes. She was so apt a pupil that she was able to dispense with the "doctor's" services during the other five miscarriages.

None of the usual untoward results had followed the use of the syringe on the first five occasions, but since the last there had been a constant uterine hæmorrhage for two years, for which the usual internal remedies had been taken without avail. She grew very weak, pale, dizzy, and unable to exert herself at all. A severe and obstinate dyspepsia also helped to make her very melancholy and miserable.

I saw her December 4th, and found the uterus not enlarged, tender, and with a tendency to retroversion. The cervix was not dilated.

The next day I dilated the cervix with a tent and thoroughly explored the uterine cavity. Nothing was found to account for the hæmorrhage, and nothing was found on the tent. The uterus was washed out with a hot carbolized douche.

Five days after the dilatation there was a slight flow for one day, but since then, nearly eighteen months, there has been no hæmorrhage at all except a scanty menstrual flow once a month.

What pleased the patient most was the immediate and entire disappearance of her dyspepsia, and she is now well and strong.

REPORT ON PROGRESS IN THERAPEUTICS.¹

BY FRANCIS H. WILLIAMS, M. D.

OIL OF WINTERGREEN AS AN EFFICIENT SALICYLATE IN ACUTE RHEUMATISM.

DR. KINNICUTT² gives a favorable account of the use of this drug in seventeen cases of acute rheumatism.

It is an essential oil, and contains ninety per cent. of the methyl ether of salicylic acid, and has marked antiseptic properties. It may be mixed in all proportions with alcohol and ether, and is slightly soluble in water; it may be given on sugar or in capsules, or shaken with two ounces of water in doses of fifteen minims every two hours. Absorption is rapid, and it is excreted mainly by the kidneys, and rapidly.

The occasional toxic effects of the acid were not observed; ringing in the ears was of infrequent occurrence; in only one case was the slightest gastric dis-

¹ Concluded from page 278.

² Medical Record, November 4, 1882.

turbance excited, and that consisted of a single rejection of the medicine.

As with other salicylates, the dose should be frequently repeated. To avoid relapses it should not be given up too early, but continued in diminished doses throughout convalescence.

Four cases of severe acute rheumatism are reported by Dr. Gottheil;¹ the success was moderate. From five to ten drops were given three or four times a day. In all of the cases the swelling, pain, and local heat rapidly diminished, and the patients were soon convalescent. A certain amount of disability was left, to relieve which it was necessary to have recourse to friction, massage, etc.

Dr. Edward Henderson² has used salicylate of soda in acute orchitis complicating gonorrhœa. He recommends its use only when the temperature is increased and in large doses, twenty grains hourly for at least three doses, and continued later at longer intervals.

THE GERMICIDE VALUE OF CERTAIN THERAPEUTIC AGENTS.

Dr. Sternberg³ has attempted to ascertain the exact value as germicides of some of the agents most frequently employed in medical and surgical practice. The importance of this subject and the care with which the experiments have been done give them unusual interest.

"To test the germicide power of a chemical reagent living bacteria were subjected to its action in a known proportion for a given time, and were subsequently used to inoculate sterilized bouillon. Failure to multiply in this fluid when exposed for twenty-four hours or more to a temperature of 100° F. was considered evidence that reproductive power — vitality — had been destroyed by the reagent used. On the other hand, failure to disinfect, that is, to destroy the vitality of the bacterial organisms used as a test, was shown by the 'breaking down' of the culture fluid.

"The micro-organisms which were used to test the germicide power of the reagents named were obtained from the following sources:—

"(1.) A micrococcus from gonorrhœal pus.

"(2.) A micrococcus from pus obtained from an acute abscess — whitlow — at the moment it was opened by a deep incision.

"(3.) A pathogenic micrococcus having distinct morphological characters obtained from the blood of a septic rabbit.

"(4.) Bacterium termo and other bacterial organisms — micrococci and bacilli — from "broken-down" beef tea which had been exposed to the air.

"In the following table, which is arranged according to the germicide value of the agents named, all experiments are given in which the micrococcus from pus was used as a test:—

EFFICIENT IN THE PROPORTION OF

Mercuric bichloride, 0.006 per cent., one part in	20,000
Potassium permanganate, 0.12 per cent., one part in	833
Iodine, 0.2 per cent., one part in	500
Cresote, 0.5 per cent., one part in	200
Sulphuric acid, 0.5 per cent., one part in	200
Carbolic acid, 1 per cent., one part in	100
Hydrochloric acid, 1 per cent., one part in	100
Zinc chloride, 4 per cent., one part in	50
Tinct. ferri chloridi, 4 per cent., one part in	25
Salicylic acid dissolved by bicarbonate of soda, one part in	25
Caustic potash, 10 per cent., one part in	10
Citric acid, 12 per cent., one part in	8
Chloral hydrate, 20 per cent., one part in	5

"The following reagents, as far as the experiments go, are not shown to have any germicide value, namely:—

Fowler's solution failed in the proportion of	40 per cent.
Sodium hyposulphite failed in the proportion of	32 per cent.
Sodium sulphite (ex-leucata) failed in the proportion of	10 per cent.
Ferric sulphate, saturated solution, failed in the proportion of	16 per cent.
Potassium iodide failed in the proportion of	8 per cent.
Liq. sinet chloridi failed in the proportion of	8 per cent.
Boracic acid, saturated solution, failed in the proportion of	4 per cent.
Zinc sulphate failed in the proportion of	20 per cent.
Sodium borate, saturated solution, failed in the proportion of	4 per cent.
Sodium salicylate failed in the proportion of	4 per cent.

"Having ascertained the germicide value of certain reagents for a single micro-organism, the question arises as to whether we are justified in assuming that other organisms of the same class, and especially pathogenic bacteria, will be killed by the same reagents in like proportion, or if we can generalize from the data obtained.

"The results show that, in general, those reagents which destroyed the vitality of the micrococcus from pus are fatal to organisms of the same class, and that their relative value as germicides is not changed when a different micro-organism is used as the test of this value. Moreover, the reagents which were ascertained to be practically valueless as germicides with the micrococcus from pus, for example, ferric sulphate, sodium sulphite and hyposulphite, boracic acid, etc., proved to be equally without value when the test was extended to other micro-organisms of the same class. But the reagents found to possess decided germicide power have, in some cases, a different value for different organisms. In other words, the vital resistance of various bacterial organisms to the reagents in question is not in all cases the same. Thus sulphuric acid failed to kill *B. termo* and the micrococcus of pus in the proportion of 0.25 per cent.; but one fourth of this amount (0.06 per cent.) destroyed the vitality of the septic micrococcus. Caustic potash destroyed the septic micrococcus in the proportion of two per cent., but failed to kill the micrococcus of pus in four times this amount (eight per cent.). The value as a germicide of the solution of ferric sulphate and sulphuric acid, in water, which has been extensively recommended by sanitarians as a *disinfectant*, evidently depends upon the sulphuric acid which the solution contains. To insure the destruction of all bacterial organisms and of the reproductive spores of those species which multiply by spores as well as by transverse fission, such a solution should be used in sufficient quantity to subject the material to be disinfected to the action of the acid in the proportion of at least five per cent. for a period of two hours. The quantity of carbolic acid used to accomplish the same result should not be less than this, five per cent., for it is necessary to keep on the safe side, and we do not know at present whether all of the pathogenic bacteria, hypothetical or demonstrated, form spores or otherwise. In the case of the anthrax bacillus and of Koch's bacillus of tuberculosis this has been proved to be true; and we have ample experimental evidence to show that these reproductive bodies possess very great resistance to heat and to those chemical reagents which kill bacterial organisms in their ordinary condition of rapid growth and multiplication by fission. Evidently therapeutic value, assuming the correctness of the germ theory, cannot be gauged by germicide power alone, for it is possible that a reagent which possesses this power in but slight degree, or not

¹ Medical Record, September 8, 1883.

² Lancet, December 16, 1882, page 1027.

³ American Journal of Medical Sciences, April, 1883.

at all, may nevertheless be capable of restricting the development of pathogenic organisms and thus limiting their power for mischief. The following table shows the percentage required to destroy vitality, and also that required to prevent the development of the micrococcus of pus.

Reagent.	Percentage required to destroy Vitality.	Percentage capable of preventing Development.
Mercuric bichloride.....	0.005	0.008
Iodine.....	0.8	0.025
Sulphuric acid.....	0.25	0.12
Carbolic acid.....	0.8	0.2
Salicylic acid and sodium biborate....	2.	0.5
Alcohol.....	40.	10.
Ferric sulphate.....	{ Failed in } { saturated } { solution. }	0.5
Boracic acid.....		0.5
Sodic biborate.....		0.5

"An inspection of the table shows that the potent germicides in our list restrict multiplication in quantities considerably less than are required to destroy vitality. In the case of iodine the difference is eight-fold, in that of carbolic acid fourfold, in that of sulphuric acid twofold, etc.

"We also see that the agents at the bottom of the list, — ferric sulphate, boracic acid, and sodium biborate, — in the proportion of five tenths per cent., prevent the multiplication of bacterial organisms, and are consequently antiseptic agents of value, although in saturated solution they fail to kill these organisms. In the case of ferric sulphate, and also of zinc sulphate and zinc chloride, this power to prevent the development of micro-organisms seems to be due to precipitation of the organic material in the nutritive medium rather than to any direct action upon the living organisms, which, as we have seen, are not killed by a far greater quantity of the reagent.

"The proportion in which mercuric bichloride prevents the development of the septic micrococcus is 0.0025 per cent., or one part in 40,000. If we suppose that there are twenty pounds of blood in a man weighing one hundred and sixty pounds, three and one half grains would be required to prevent the development of the septic micrococcus. This amount would be much too large for a single dose, but it is probable that there is an accumulation of this drug in the system from its incomplete elimination. In view of this it is not difficult to believe that mercuric bichloride may be introduced into the system in quantities sufficient to restrain the development of the parasitic micro-organism, and we will have a satisfactory explanation of the *modus operandi* of this remedy in syphilis if this is eventually demonstrated to be a "germ" disease. The drug has been found useful in diphtheria, typhoid diarrhoea, erysipelas, and dysentery. Calomel has recently been recommended as a specific during the first nine days of enteric fever. Ferric sulphate and zinc sulphate possess considerable antiseptic power, but are unreliable as antiseptics.

"It is evident that mercuric bichloride and iodine are germicide agents of the highest value; the proportion in which they would certainly be efficient may be given as 0.02 per cent., or one part in five thousand for the bichloride and one part in two hundred for iodine (dissolved in a solution of iodide of potassium). The poisonous properties and want of color of a solution of corrosive sublimate of the proper strength make this

of doubtful utility for general use in a sick room, but in iodine we have an agent which might be used for disinfecting spittoons, bed-pans, etc."

Hospital Practice and Clinical Memoranda.

A CASE OF MANUAL DILATATION OF THE OS UTERI FOR THE REMOVAL OF A DEAD FÆTUS.

BY A. WORCESTER, A. M., M. D. (HARV.)

ON August 15, 1883, during my service as house physician in the Boston Lying-In Hospital, I was called in consultation to see Mrs. S., a patient of Dr. W. A. Dunn's, under the care of his assistant, Dr. D. J. Brown. I found a pale, slightly-built woman, twenty-one years old. Two years ago her only living child was born, since when she has suffered two miscarriages. She has coughed badly for some years (fibroid phthisis being the diagnosis of her physician). She is now five and a half months pregnant. On August 12th, three days before, the membranes ruptured. On the 14th, at ten P. M., labor pains began, and Dr. Brown was summoned. He found the cord feebly pulsating in the vagina, and the os uteri barely admitting the tip of the finger. The next morning there was no change except that the pulsation in the cord had ceased. At the time of my visit she had had no pains for several hours, but complained of a dull, continuous pain in the right iliac region.

Examination revealed an entire absence of abdominal tumor. A cold and pulseless loop of the cord protruded from the vulva. The os uteri barely admitted the finger-tip, and was hard to reach. There was a distinctly offensive odor, but no discharge.

The patient was etherized, and at five P. M. manual dilatation of the os uteri was begun. The difficulty was heightened by a lateral flexion of the uterus. The fundus rested in the right iliac fossa, and although its position could be easily corrected after one finger was hooked into the cavity, it was impossible from the outside so to hold it. Despairing of introducing a second finger while the first had thus to serve as a tenaculum, the ball of the thumb was held in the internal os, and by steadily flexing the last phalanx sufficient dilatation was obtained to allow two fingers to enter the cervix. Twice the operation was suspended that the patient might clear her trachea. Instead of occasional contractions of the uterus it seemed as if there were only occasional relaxations. As soon as the legs of the fœtus could be reached they were drawn down, and, owing to insufficient dilatation, were torn off. The body was removed piecemeal. In spite of care not to separate the placenta, which could easily be felt on the right side, before the head was extracted, a hæmorrhage began. With a pocket-case needle holder I succeeded in perforating, and smashing, and extracting the head. The placenta was partially adherent. After tearing away what I could the uterine walls were rubbed clean with the fingers. The hæmorrhage was not controlled until hot and cold intra-uterine douches were alternately given. The operation lasted two hours. As a precautionary measure intra-uterine douches were given the four following mornings. Convalescence normal. On the tenth day she sat up, and a month after is reported doing nicely.

New Instruments.

A NEW DECAPITATING INSTRUMENT.

THE operation of decapitation is rarely called for, but when required the better the instrument obtainable the more easily the operation can be done.

Decapitation is called for in an impacted shoulder presentation, when the shoulder is jammed into the pelvic brim so that it is impossible to use forceps or do version. In these cases the membranes are likely to have been long ruptured, permitting the liquor amnii to drain away, and the uterus, unable to overcome the obstruction and empty itself, is generally in a state of tonic contraction around the child. Often in those cases that have gone on for some time without the requisite assistance one arm of the child is found prolapsed into the vagina with the hand showing at or near the vulva. Decapitation is taking the place of craniotomy in cases of this kind, and should always be done when the neck can be reached.

The old operation was to insert a blunt hook under the neck of the child with the point upwards toward the bladder, then, being sure that the instrument was in position, and having guarded its point with the left forefinger, the handle was turned a little to carry the point away from the head, and drawing down upon the handle towards the perinæum a quick turn was given the instrument, and the neck was broken, then by twisting the hook around several times the head was severed from the body.

During the past few years Dr. W. L. Richardson has been using in his operative course at the Harvard Medical School a cutting hook together with the blunt hook. He uses the blunt hook to break the neck, but does not twist the neck off with it as in the old operation. Having broken the neck the blunt hook is removed, and a cutting hook, with an internal sharp edge, is inserted over the neck, with the point downwards, away from the bladder; the forefinger of the operator's left hand is then placed upon the end of the hook to protect the soft parts of the woman, while with a slight up and down motion of the handle, and traction with the right hand, the neck is severed.

This operation is far preferable to the old one, but necessitates the introduction of two hooks, the blunt and the sharp, which is difficult to do when the shoulder is firmly impacted. To obviate this difficulty as far as possible I have had made the instrument shown in the diagrams. It is nothing more than the blunt

movement of the handle, the point of the instrument being protected by the left forefinger, the head is separated from the body. The head slipping up, the body of the child is drawn out by the prolapsed arm, the operator's fingers of one hand covering the sharp cervical vertebrae. The head is then removed with the forceps, care being taken that the ragged part comes between the blades.

The instrument is very simple, easily cleaned, and not expensive, and by having the two instruments combined in one the difficulty of inserting two separate instruments is avoided.

ROBERT B. DIXON, M. D.

Boston, September 10, 1883.

Reports of Societies.

QUARTERLY MEETING OF THE RHODE ISLAND MEDICAL SOCIETY.

A QUARTERLY meeting of the Rhode Island Medical Society was held in Newport, September 20, 1883, the President, DR. JOB KENTON, in the chair. This was the first meeting of the Society held in Newport for twenty-three years, though in its early days every alternate meeting was held in that city.

The secretary, DR. G. D. HERSEY, exhibited reels of Pancoast's

BLACK IRON-DYED SURGICAL SILK,

which is furnished in fourteen sizes. The finest sizes are adapted to plastic surgery and delicate operations, the medium sizes to ordinary operations, and the strongest when great strength of ligature is required.

In operations like circumcision where considerable oedema of the parts is apt to conceal the sutures the black silk is more readily seen than the white, and may be removed with less disturbance of the flaps.

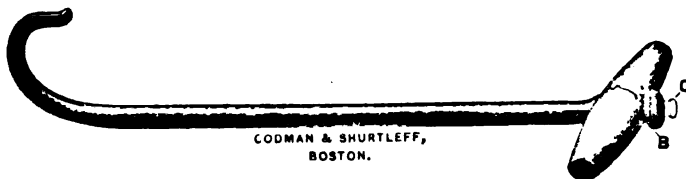
Successful removal of sutures is often a matter of great importance, as in ophthalmic and plastic operations where the slightest injury to the newly united edges is to be avoided; and it is in these cases that the black silk is especially useful. Moreover, this silk, dyed with iron, is less irritating to the flesh than white lead-dyed silk, and sutures will remain a long time without causing inflammatory action.

DR. W. E. ANTHONY read a paper on the

MANAGEMENT OF THE THIRD STAGE OF LABOR,

advocating immediate delivery of the placenta. The doubling together of the detached placenta and its expulsion with the axis of the folded mass parallel with the axis of the maternal passages appears to be the natural

mechanism of placental delivery. Thus one edge of the placenta should appear first at the vaginal outlet. Traction on the cord causes an unnatural presentation of the broad fetal surface, the placenta resembling an inverted umbrella. The author adopts Credé's method for the removal of the after-birth,—preparing for expression of the placenta by grasping the uterus during the latter part of the second stage of labor and compressing it during a pain, following the womb as it is gradually emptied, keeping



and sharp hooks combined. The larger diagram shows the instrument as it should be when inserted over the neck of the child, and by the method already described the neck is broken. Without removing the instrument, but by simply turning the thumb-screw, *B*, a concealed knife, *A*, is drawn out one fourth of an inch on the inner side of the blunt hook, and by traction, accompanied by the simple up and down

up continuous pressure during and after the expulsion of the child, and allowing no cessation of uterine action until delivery is fully accomplished. Should there be any delay in the delivery of the placenta, the following procedure is advised: without relaxing the grasp on the uterus, pass the fingers of the unoccupied hand into the vagina and uterus; if necessary, detach and remove the placenta immediately. The relaxation and temporary anæsthesia of the parts following child-birth favor this manœuvre.

The following direct advantages were claimed for immediate placental delivery: Security against post-partum hæmorrhage, uterine inertia, retained placenta or fragments, severe protracted after-pains, prolonged lochial discharge, and septicæmia. Moreover, it saves time, and is in accordance with natural indications.

DR. D. H. BATCHELDER believed that there are few perfectly normal deliveries, because the placenta is not uniformly attached to the fundus. The severest pains are felt in the direction opposite to the attachment of the placenta,—thus front pains indicate a posterior attachment, while anterior attachment of the placenta is accompanied with posterior pains and back-ache.

In two cases of rupture of the uterus the placenta was attached low down and posteriorly, and rupture was at the opposite side,—in front, confirming the view that the strongest uterine contractions are opposite the placental attachment. Traction on the cord in delivery of the after-birth is permissible if one inserts a finger to pull down one edge of the placenta. An assistant should press on the fundus.

DR. S. W. FRANCIS reported a case of

PROBABLE EPITHELIOMA CURED BY ASTRINGENT WASHES.

Mrs. B. had a circumscribed induration as large as an almond in the cheek, having its mucous surface much eroded by contact with the sharp edges of a tooth cavity. The offending tooth was at once extracted, but the removal of the local irritant was followed by no improvement in the bad appearance of the inner cheek. The swelling and induration became greatly increased and extended forward so as to produce very marked external deformity. Dr. Francis treated the case as follows:—

R Tinct. opii	3 ss.
Tinct. myrrhæ	aa 3 i.
Glycerine	3 ss.
Squibb's liq. ferri subsulph.	q. s. ad 3 iv.

M. S. Apply one teaspoonful of mixture to inside of affected cheek four times a day.

In addition to this local treatment the patient was ordered milk diet, with strong broth, and twenty drops of the syrup of iodide of iron, three times a day. In three weeks seven eighths of the enlargement and induration were gone, the cheek and lip became thin and flexible, and all the angry appearance had vanished. This case was reported to illustrate the wisdom of first employing mild measures before resorting to the knife.

REPRODUCTION OF FIRST PHALANX OF INDEX FINGER.

DR. O'LEARY reported the case of a boy with lacerated wound of the index finger and compound fracture of the first phalanx apparently demanding amputation, but as it was not convenient to etherize the patient, treatment at the hospital was recommended. The boy, how-

ever, did not go to the hospital, but reappeared three weeks later with bare bone protruding from the wound. The entire phalanx was found detached from the periosteum and was removed. Bone was reproduced, and the patient now has a strong finger with movable joint.

DR. EZRA DYER exhibited

A NEW PERIMETER.

which consists of a spiral wire forming a hemisphere of about the same diameter as Förster's perimeter. Within the hemisphere is a revolving arm in the form of a quadrant carrying a traveler which follows the spiral wire. The object for testing the field is attached to the traveler. The patient's chin, as in similar instruments, is placed upon a rest with the eye to be tested fixed on an objective button at the inner end of the central axis of the instrument. The revolution of the arm carries the traveler rapidly or slowly, as desired, over the whole field of vision. The exact boundaries of impaired vision are determined by graduations on the revolving arm, and by a graduated disk back of the central axis, where a needle indicates the meridian.

Quantitative perception of light can be determined by attaching to the traveler a small electric light supplied by a Smee battery, by which the intensity of the current can be regulated to produce any light, from a dull cherry red to the brightest possible. By placing colored disks on the traveler, the same instrument can be used to detect eccentric color-blindness.

DR. H. G. MILLER reported a case of

CHOROID DISEASE WITH PIGMENTED PATCHES,

which varied in color, size, and position. The patient was able to observe his own symptoms very closely, and made a series of beautiful illustrations of the changing colored spots. Dr. Miller exhibited the pictures, remarking that it would be fortunate if patients could oftener assist their physician as intelligently.

DR. T. W. PERRY reported a case of

EXFOLIATIVE DERMATITIS.

The patient, a middle-aged Englishman, had a chill June 12th, with intense redness of the skin. Desquamation took place on the fourth day, and extended over the entire body. The patches from the palms of the hands and soles of the feet were thick like leather. The epidermal covering of one finger was removed entire like a glove finger. The chill recurred July 3d, July 29th, and August 11th, and each chill was followed by desquamation on the fourth day. There were no other symptoms besides the chill, intense hyperæmia of the skin, and desquamation.

He had a similar attack thirteen years ago, when he recovered under arsenic, iron, and cod-liver oil. Same treatment for this attack with addition of calcium sulphide. Cod-liver oil was found to be the most soothing local application to the tender skin after the exfoliation.

MEDICAL EXAMINERS.

The committee on the proposed law regarding a system of medical examiners in Rhode Island reported through the chairman, Dr. Ariel Ballou, "that further time was needed for the study of the subject, and the committee present no report, but wish a free discussion of the subject."

DR. S. W. FRANCIS, another member of the committee, had sent a circular to each town clerk in the

State, asking the number of coroners in the town, how elected, and occupation. Replies were received from thirteen towns and cities. In five the trial justice acts as coroner, in eight coroners are elected by the town council. The latter, including Providence and Newport, have in all twenty coroners, of whom only two are physicians. The list includes three lawyers, two town clerks, two farmers, a grocer, clerk, accountant, correspondent, auctioneer, undertaker, station agent, overseer of the poor, etc.

DR. H. R. STORER, who read the above report, called attention to the utter lack of training which these miscellaneous occupations give for the responsible duties of the office. Under the proposed law the medical examiner's duty ends with rendering a decision whether or not murder has been committed. The case then passes to the trial justice of the town or city, who hears the evidence, and conducts the preliminary trial of the suspected person.

DR. HENRY W. WILLIAMS, of Boston, explained in detail the origin and present working of the Massachusetts system of medical examiners. The office is filled in that State by seventy first-class men, and the public, as well as prosecuting officers, are better satisfied than with the old system.

Replying to numerous inquiries, Dr. Williams said that the cost to the State was reduced to two thirds the cost of the old system. In Suffolk County the gain was even greater.

Politically speaking, the reduction of cost was satisfactory, and scientifically speaking, the results are emphatically a great improvement.

Concerning the limit of age, twenty-five to forty-five, in the proposed law, he disapproved that limit. Few men under thirty are qualified for such work, and the best man for the position might be forty-six.

DR. STORER, defending the last clause, thought that the younger men are better educated in this comparatively new science, and more alive to the interests of a new law.

DR. STIMSON inquired whether the medical examiner's jurisdiction should include all cases of sudden death.

DR. STORER thought that there ought always to be some investigation of sudden death, as otherwise cases of poisoning might escape detection.

The subject was referred back to the committee with instructions to collect further information and report at the quarterly meeting in December. Drs. Lloyd Morton, of Pawtucket, and H. G. Miller, of Providence, were added to the committee.

The Society are unanimously in favor of a change in the present law, and will undoubtedly make strenuous efforts for reform.

ELECTION OF FELLOWS.

As recommended by the Board of Censors, Drs. A. H. Harrington, of Providence, J. P. Sweeney, of Central Falls, Henry Arnold, of Foster, George V. Foster, of Westerly, and Ezra Dyer, of Newport, were elected Fellows.

REGISTRATION OF DEATHS.

DR. HENRY E. TURNER called attention to the fact that physicians too often leave to the undertakers all responsibility concerning death certificates, not giving a certificate unless the undertaker asks for one. On

this motion the Committee on Medical Examiners are also requested to report whether the present law concerning the registration of deaths can be more thoroughly enforced.

THE AMERICAN GYNECOLOGICAL SOCIETY.

THE eighth annual meeting of the American Gynecological Society convened in Philadelphia, September 18th, and remained in session three days. The meeting was held in the College of Physicians.

FIRST DAY. MORNING SESSION.

Dr. Gilman Kimball, of Lowell, Massachusetts, President of the Society, in the chair. The meeting was called to order at ten o'clock, and the following members were recorded as present by the Secretary, Dr. Frank P. Foster, of New York: Fordyce Barker, New York; Robert Battey, Georgia; B. B. Browne, Baltimore; Wm. H. Byford, Chicago; John Byrne, Brooklyn, New York; H. F. Campbell, Georgia; Jas. R. Chadwick, Boston; E. L. Duer, Philadelphia; T. A. Emmet, New York; F. P. Foster, New York; Wm. Goodell, Philadelphia; Wm. T. Howard, Baltimore; J. V. Ingham, Philadelphia; A. Reeves Jackson, Chicago; J. T. Johnson, Washington; Gilman Kimball, of Lowell, Massachusetts; W. T. Lusk, New York; M. D. Mann, Buffalo; C. D. Palmer, Cincinnati; Theophilus Parvii, Philadelphia; Thaddeus A. Reamy, Cincinnati; J. C. Reeve, Dayton; A. H. Smith, Philadelphia; R. S. Sutton, Pittsburg; H. P. C. Wilson, Baltimore; Elwood Wilson, Philadelphia; Ely Van de Warker, Syracuse.

The names of a number of invited guests were read by the Secretary, as recommended by the Council.

ADDRESS OF WELCOME.

DR. E. L. DUER of Philadelphia, delivered a brief address of welcome on behalf of the Philadelphia members.

SUPERINVOLUTION OF THE UTERUS.

DR. JOSEPH TABER JOHNSON, of Baltimore, read a paper describing a condition first described by Sir James Simpson as superinvolution of the uterus. Although Sir James carefully described this some thirty years ago, stating that his patients derived very little benefit from treatment, the subject is very infrequently referred to in the text-books; although it is not uncommon, and Simpson thought that the number of cases would be found to be very large if properly looked for. It is to be distinguished from atre-ia of the uterus after labor, and he limited the term to a condition of excessive involution occurring after the uterus has been emptied of some mass, normal or abnormal, which had distended it beyond its ordinary capacity,—as in hydro-metria, pyrometria, hydatids, fibroid or other tumors, dropsy of the amnion, or after ordinary gestation or abortion.

He related the history of four cases in his own practice, in which the results of the treatment had not been very encouraging, but they were as good as those reported by others. Simpson reported several, with no other result. Whitehead reported a case in which the uterus completely disappeared after labor. Scanzoni recognizes labor as a cause of atrophy of the ovaries. Prolonged lactation has been assigned as a cause of superinvolution of the uterus, but this was

not the case in one of his patients at least, for the child was still-born. Dr. Edes states that in some cases the one supreme effort at reproduction entirely exhausts the procreative power, and atrophy follows.

DR. BARKER, in opening the discussion, believed that it would be proper to extend the application of the term *superinvolution* to a series of cases in which a similar condition occurs after uterine fibroids, in which retrograde processes sometimes proceed to an extreme extent. With regard to the relative frequency of these cases, it will be acknowledged that a consultant would be likely to see them much oftener than other practitioners. He saw in his own practice two or three cases every year; he thought that while it is comparatively rare, it occurred quite as frequently as stated. There is an important point in the prognosis and treatment. Where there are signs of constitutional disturbance each month indicating functional activity of the ovaries, treatment may be of service; where the ovaries are atrophied, and no symptoms of ovulation occur, he would not expect much from treatment. He reported the details of a case that he had under systematic treatment for three years. He applied electricity, and gave pills of aloes, sulphate of iron, etc., dilated the cervix, and succeeded in establishing menstruation. She was subsequently delivered of a living child. In another case a lady had had a miscarriage, while traveling in Europe, from overfatigue. She had great hæmorrhage, and did not menstruate afterwards. There was this condition of *superinvolution*, but each month great constitutional disturbance was manifested. After a similar course of treatment she conceived, and had a living child.

The main point is that where *superinvolution* is associated with functional activity of the ovaries we may have great hope of restoring the uterus, but where they have lost their activity treatment is of little use.

DR. A. REEVES JACKSON considered it of importance to distinguish between *superinvolution* of the uterus and the early appearance of the climacteric, in considering the advantages of treatment. He had been surprised at the statement as to the relative frequency of *superinvolution*. He had himself seen but a single case, and this was of doubtful diagnosis. In introducing the probe in this case he penetrated the uterine fundus, but was much relieved by finding no bad results following it. Whether the atrophy arises from a local or a general cause is of great practical importance as regards the treatment, and he, therefore, approved the distinction made by Dr. Barker.

DR. VAN DE WARKER called attention to a possible source of error. Some cases of laceration after labor are followed by atrophy of the cervix, which would shorten the canal, and might lead to the idea of *superinvolution*. If this were the case, it would be easy to explain the supposed comparative frequency of the condition. He thought that Dr. Johnson's second case might have been of this kind.

DR. WILSON, of Baltimore, regarded the condition as extremely rare; in all his practice he had seen only two or three cases. He approved of the views of Dr. Barker as to those which are susceptible to improvement, and those which are not.

DR. BATTEY considered *superinvolution* of the uterus the natural result of removal of the ovaries in his operation. In some cases it had been extreme. He attributed the condition to the ovaries rather than the uterus. He had never seen it after removal simply of

the Fallopian tubes. In the treatment he approved of electricity and dilatation of the canal with sponge tents.

DR. BYFORD said that there was considerable confusion concerning the exact meaning of *superinvolution* as distinct from *subinvolution* or *hyperinvolution*, owing to want of definite knowledge. Is *superinvolution* a stage in a progress to atrophy? He believed that there is a decided difference between *superinvolution* and atrophy, but in the great majority of cases what is called *superinvolution* is an early stage of atrophy. In *superinvolution* the uterus, though reduced, still continues its ordinary characters and its normal innervation. He thought with Dr. Barker that these cases may be divided into those with simple uterine *superinvolution* and those complicated with ovarian disorder. Where the ovaries are much reduced by *superinvolution* the uterus must necessarily become so, but where they still retain their functional activity the case may be cured.

DR. CAMPBELL did not regard it as necessary for *superinvolution* of the uterus to occur, that there should be either atresia of its cavity, or atrophy of the ovaries. He reported a case in which *superinvolution* followed extreme distention of the uterus by dropsy of the amnion. Although the patient had been regular before and had had children every year, she never menstruated again. The over-distention had the same effect upon the uterine muscles as it sometimes has on the bladder.

DR. JOHNSON, replying to Dr. Van de Warker, stated that he had at first supposed the second case to be one of atrophy due simply to the cervical laceration, but had given up this opinion, because he had operated upon the cervix and restored it, and yet she never had menstruated. In reply to Dr. Jackson, he said that he had not claimed that the disorder is very frequent, but that it is frequent enough to deserve more attention. The point raised by Dr. Barker is important both as to prognosis and treatment.

THE IMPORTANCE OF CLEANLINESS IN SURGICAL OPERATIONS.

DR. R. STANSBURY SUTTON read a paper embodying his impressions of a visit to the European hospitals, particularly with reference to the general adoption of the principles of Listerism. Although minor differences of application were found, some using the spray, others not, some using carbolic acid, others discarding it entirely, the greatest care was now manifested with regard to cleanliness after surgical operations, to avoid contamination of wounds. He contended that this great change had been brought about through the teachings of Lister, and that the profession owed a great debt of gratitude to him for the great advance in practical surgery.

DR. EXMET spoke in favor of cleanliness, and repeated what he had elsewhere said, that the death warrant of the patient is often carried under the finger-nail of the surgeon.

DR. LUSK uses the spray in operations in the wards of Bellevue Hospital, with satisfactory results, and could perform operations successfully with its aid which without it were uniformly fatal.

DR. WILSON, of Baltimore, used the spray in the room before the operation, not during operation.

DR. CAMPBELL thought that too much credit was given to Mr. Lister by ascribing to him all the cleanliness in surgical operations. Some surgeons were clean

before Mr. Lister came. Referring to the statistics he could not say that the results after amputations were any more favorable since the introduction of carbolic acid than they were before. He referred to a case, where after amputation of a thigh delirium and symptoms of prostration appeared. He advised that the carbolic acid be stopped, and the patient recovered promptly.

DR. SUTTON denied that carbolic acid and Listerism are synonymous, and he claimed that even those who were most outspoken in denouncing Listerian treatment had adopted its principle in their practice.

AFTERNOON SESSION.

HOT WATER IN SECONDARY HÆMORRHAGE AFTER PELVIC OPERATIONS.

DR. ALBERT H. SMITH, of Philadelphia, regarded hot water at a temperature of 115° F. to 120° F., as an efficient hæmostatic, not only in obstetric practice but also after surgical operations. He employed it regularly after every case of labor (slightly tincturing it with some form of antiseptic) in order to obviate hæmorrhage, and continued the irrigation until the water came away perfectly clear. He wished in this communication to call attention to the use of this agent in plastic operations, even where bleeding occurs from moderately large vessels. Referring to cases reported by Dr. Skene, he was surprised to notice that he had been unable to control hæmorrhage; the speaker was confident that hot water will arrest bleeding in just such cases. After relating the clinical history of such a case he directed attention in conclusion to three points: (1) The great advantage of this agent over all others for arresting secondary hæmorrhage after pelvic operations; (2) its efficiency when it is carried to the bleeding surface; and (3) its simplicity and convenience of application.

DR. REAMY approved of hot water as a hæmostatic, and in operations upon the perineum he is accustomed to keep a stream of it flowing over the surface.

DR. CAMPBELL, in post-partum hæmorrhage, was perfectly satisfied with iodine injections, as recommended by Dr. Trask (one part compound tincture of iodine to four of water). He called attention to a form of uterine dilator known as the metroclast for use in making intra-uterine injections, permitting free outlet for the water.

DR. MANN mentioned a case of amputation of the cervix where the hot water failed to check hæmorrhage. He then applied Pacquelin's cautery, and tamponed, but the patient died in ten minutes from loss of blood. Dr. Mundé had reported a similar case.

DR. GOODELL thought that Dr. Mann had expected too much from the hot water. In post-partum hæmorrhage he would prefer hot vinegar. After operations, hot water applied to the bleeding surface will usually check the hæmorrhage.

DR. BARKER said that hot water requires several minutes before stopping the bleeding, but cases occur in which even this delay is a serious matter. In one case where the hæmorrhage was very great he had succeeded in checking it by dipping cotton in fluid extract of ergot and applying it to the bleeding surface of a cauter of the cervix, confining it with a tampon.

DR. CAMPBELL said that in post-partum hæmorrhage anything which will stimulate the uterus to contract will check the bleeding. This is the great value

of iodine; it is not a styptic in itself, but it causes contraction of the uterus, and closes the bleeding sinuses. Now, in uterine cancer and after operations an agent is needed that will cause coagulation of blood in the vessels, such as hot water or other hæmostatics.

DR. SMITH, in closing the discussion, attributed the failure in Dr. Mann's case to the difficulty of applying the hot douche to the bleeding surface. He thought it might be done by elevating the hips of the patient so that the blood might gravitate to the upper portion of the body. If this is done the specific action of the hot water upon the surface can be attained. He said that Dr. Goodell's suggestion to medicate the hot water with vinegar was similar to the use of other antiseptics which he had mentioned. He regarded hot water as the most important element.

DYSMENORRHOEA.

DR. C. D. PALMER, of Cincinnati, read an admirable paper on Some Points Connected with the Subject of Dysmenorrhœa. The object of this communication was to establish the fact that the causes of dysmenorrhœa are not local, but general; it is not due to mechanical causes, but is essentially a neurosis. All the abnormalities of the uterus which have been given as the cause of dysmenorrhœa may exist without producing these symptoms, and even where they do exist the extent of the abnormality and the severity of the attendant symptoms are not proportional.

Local treatment may be required, but always conjoined with systemic treatment. Of the remedies, arsenic and iron are most important; iron, where there is marked anæmia and scanty flow; arsenic, where the flow is irregular and profuse. He recommended a combination of iron, in the form of sulphate, carbonate or chloride, and nux vomica or phosphorus; cod-liver oil and quinine may also be given with advantage. Galvanism is very useful, the cathode over the hypogastric region, and the anode applied to the perineum or along the spine; this is especially indicated in the purely neurotic or spasmodic form of the disease. In such cases the old mixture of mercuric chloride and potassium iodide he had used with great relief. Concentrated tincture of *Cimicifuga racemosa* given in the intervals, and in small doses during the paroxysms, is useful in spasmodic cases; tincture of *pulsatilla* is also useful. He referred to the abuse of narcotics in these cases; opium, chloral, etc., do not cure the trouble but only render it more difficult to cure by favoring a condition of the nervous system which continues the disease.

In stenosis dilatation of the cervix by bougies is useful and also in the purely neurotic form, because it makes the mucous membrane less sensitive. He believed that the operation of incision was too much relied upon, and its results overrated. The stenosis is usually at the inner os, which explains why such cases are usually barren.

DR. CHADWICK said that to a very large extent he had given up the idea of obstructive dysmenorrhœa. The spasmodic contraction of the uterus is a peristaltic movement of the muscles caused by irritation. This in some cases is due to catarrh, when the neurotic element is strong. He recalled two cases in which he could discover no local cause whatever. Regarding them as instances of general disturbance of the nervous system due to the menstruation, he gave the bromide of sodium (gr. xx. t. d.) before the period, and fluid

extract of coca and chloride of ammonium, with good results.

DR. BARKER thought that the cases of mechanical dysmenorrhœa are comparatively rare. He believed that there is no functional disorder of the woman in which it is more necessary to make a careful diagnosis than in dysmenorrhœa. He believed that in some the uterus is at fault, in others the ovaries; in the first, pain continues during the discharge; in the second, it is relieved by the discharge.

With regard to the treatment: he most frequently uses the lactate of iron in three to five grain doses three times a day, usually associated with chlorate of potassium, which has a very good effect in modifying the condition of these organs, commencing this course about ten or twelve days before the menstrual period appears. In the interval there is one remedy which nearly approaches a specific, it is a pill, given in capsules, two after each meal, to be continued through the menstrual period.

There is another class of cases in which the pain does not appear until the period is on for two or three days, in strong young women with strong vitality. Here there is too much ovarian excitement. In these cases bromide of sodium in fifteen to twenty grain doses in the middle of the forenoon, afternoon, and at bedtime. This is likely to occur in young widows, who had good health before; nothing abnormal is detected upon vaginal examination to account for the dysmenorrhœa.

SECOND DAY. MORNING SESSION.

DR. GILMAN KIMBALL, of Lowell, Massachusetts, delivered the

ANNUAL ADDRESS OF THE PRESIDENT.

He selected for his subject Dr. Nathan Smith, of Dartmouth College, of whom he gave a biographical sketch. Dr. Smith performed ovariectomy successfully at Norwich, Vt., in 1821, without being aware that he had been anticipated by McDowell. This was the second successful operation in this country, and was as truly original as that performed by McDowell. Without disputing the position of McDowell as the father of ovariectomy, the justice of whose claim is now acknowledged everywhere, he wished still to pay this tribute to Dr. Smith, whose genius, indomitable will, and untiring energy had done more for practical medicine and surgery than that of any other individual in this country. In point of absolute merit Smith stands beside McDowell.

PROFESSOR GROSS made a few remarks upon the paper, reaffirming McDowell's claims as the originator of ovariectomy.

A RARE FORM OF ABDOMINAL TUMOR.

DR. THADDEUS REAMY, of Cincinnati, related the histories of three cases of abdominal growth, which on tapping were found to contain blood. The two which were tapped recovered, the third died, and upon examination the tumor was discovered to be a sarcoma of the omentum.

DR. LEE advocated tapping as an aid to diagnosis.

DR. SUTTON did not believe that a diagnosis could be made during life between cancer and sarcoma of the omentum. He would prefer abdominal section for diagnostic purposes.

DR. CAMPBELL thought that as such growths are

apt to be pedunculated he would advocate their removal even if they were malignant; it is proper to give the patient the benefit of the operation.

DR. REAMY would not approve of the doctrine advocated by Dr. Sutton, who claimed that it would be more judicious to open the abdominal cavity than to tap. The hypodermic needle would remove enough fluid for diagnostic purposes, and tapping in at least one case was followed by a return to robust health.

A paper on A New Method of Operating for Fistula in Ano was read by title, in the absence of the author, Dr. E. W. Jenks, of Chicago.

CONGENITAL FISSURE OF THE FEMALE URETHRA WITH EXSTROPHY OF THE BLADDER.

DR. HENRY F. CAMPBELL, of Georgia, read a clinical paper on Congenital Fissure of the Female Urethra with Exstrophy of the Bladder, and reported a case in a child two years of age. He inquired what would be the best time for operating, at an early age before the parts had developed, or after attaining puberty?

DR. MANN referred to a case in which early operation had been performed with satisfactory results.

DR. BROWN, of Baltimore, mentioned a case of this kind with a calculus in the ureter; operation was declined, and the patient died.

DR. CAMPBELL said that he had feared that the necessary removal of tissue in paring the edges might remove some that would contribute to further development. The inquiry was altogether in the interest of the patient.

A STUDY OF THE ETIOLOGY OF PERINEAL LACERATION WITH A NEW METHOD FOR ITS PROPER REPAIR.

DR. EMMET invited attention to a subject which had claimed very much of his attention during the past twenty years. He had become convinced that simple laceration of the perinæum, not involving the sphincter, was not really the cause of the many symptoms which had been attributed to it; even after healing the irritation from the cicatrix was slight. Laceration of the perinæum may be present without any of the so-called symptoms, and on the other hand, such symptoms may be present to a marked degree without any laceration whatever. He insisted that the perinæum does not support the vagina and uterus, as commonly taught, but that a more important structure is concerned. He discussed the anatomy of the pelvic fascia, and showed its sheath surrounding the vagina, and passing to the brim of the pelvis. This sheath of fascia may be ruptured with or without any external laceration. He claimed that where it is ruptured, the posterior wall of the vagina rolls downward and outward, so that if there happen to be a perineal laceration, it appears greatly exaggerated. He claimed that the proper mode of repairing such lacerations is to make two crescentic denudations in the posterior surface of the vaginal wall, which, when brought together, will bring the stitches entirely within the vagina.

The discussion of the paper was postponed to the afternoon session.

AFTERNOON SESSION.

DR. EMMET gave a résumé of his paper on

LACERATION OF THE PERINÆUM.

He claimed that laceration of the perinæum does not give rise to the symptoms which have been attributed

to it. The laceration is never so extensive as it appears. There is no such body in existence as the so-called perineal body, to restore which is supposed to be the object of the operation. The object of the operation really should be to bring up the posterior wall of the vagina in contact with the anterior wall and prevent ballooning. By his operation this is attained, and any perineal laceration may be disregarded or treated, it matters little whether it is attended to or not. The point is that the support is afforded by the pelvic fascia, and wherever the posterior wall of the vagina drops away from the anterior it is evident that the fascia is at fault.

A general discussion followed this paper, but as it was evident that the lecturer and his auditors did not fully understand each other, Dr. Emmet begged that they would reserve their judgment until they had an opportunity of reading his paper.

ACCIDENTAL PUNCTURE OF THE UTERUS IN LAPAROTOMY.

DR. C. C. LEE, of New York, read a paper on the Management of Accidental Punctures and other Injuries of the Gravid Uterus as a Complication of Ovariectomy, in which he gave the details of seven cases, including one of his own.

First. The pregnant womb may be punctured or otherwise wounded during laparotomy without necessarily causing abortion.

Second. Miscarriage seems, both *a priori* and from clinical evidence, to depend upon injury of the uterine contents, not of the womb itself, however severe.

Third. If the former has certainly occurred, Cæsarean section is indicated, and should be promptly performed. In this case the utmost care must be subsequently taken to secure thorough drainage from the uterine cavity.

Fourth. If the uterine walls alone are injured the wound is to be treated on general principles. If a deep puncture or incision, it must be sutured with the minutest care, with exact coaptation of the edges. For this purpose fine silk sutures, rendered antiseptic, are the best. If a nick or superficial puncture, it must not be ligated, for ligatures cut quickly through uterine tissue; if too small to be sutured the bleeding points must be lightly touched with the thermal cautery until oozing has ceased. Good surgery and the dictates of humanity alike demand that under such circumstances a chance of survival be given the child as well as the mother.

The paper was discussed by DR. WILSON, of Baltimore, who reported a case, DR. GARRIGUES, and DR. BYFORD.

EXTIRPATION OF THE CANCEROUS UTERUS.

DR. REEVES JACKSON, of Chicago, read a paper entitled Is Extirpation of the Cancerous Uterus a Justifiable Operation? The answer was that it was not justified by the results, as cancers show great liability to return, and the operation itself is highly dangerous. The diagnosis cannot be made sufficiently early to afford any hope of cure by Freund's operation, as it is called.

DRS. VAN DE WARKER, EMMET, PALMER, and BAKER indorsed the author's conclusion, and preferred local treatment.

DR. SUTTON, of Pittsburg, believed that the opera-

tion offered the only chance for life, and described the methods of operation by Schroeder and Martin.

DR. JACKSON said that the operation had one recommendation, it usually relieved the patients of their sufferings very effectually. He compared it with a game of chance where the gamester stakes what he does not own — the life of his patient — on a desperate hazard.

Recent Literature.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F. R. S. With an Introduction on General Anatomy and Development, by T. HOLMES, M. A. Edited by T. PICKERING PICK. A new American from the Tenth English Edition. Henry C. Lea, Son & Co. 1883.

The last American edition of this standard text-book appeared in 1878, and, as the original has been twice revised since, we are glad to welcome this new issue, which is from the tenth English edition. The general character of the book is unchanged, but in some respects it is much improved. The histology has received much attention and is very fair. Perhaps, indeed, we should speak more strongly in its favor, and we think we may say that it is as complete as it is desirable that histology should be when forming part of an anatomical text-book for students. Very much the same may be said of the embryology. There are several new plates in the body of the work. We are particularly glad to see some good views of the topographical relations of the thoracic and abdominal viscera. The section on the brain is more thoroughly illustrated. We regret to see a serious error, to which we called attention five years ago, still uncorrected. We refer to the parieto-occipital fissure in figure 376, page 625. We can only say that if this fissure really be the one so named in the plate, the specimen is quite abnormal. A new and welcome feature is a diagram of the course of the fibres in the medulla. The arachnoid is no longer described as a serous membrane. We find the minute anatomy of the liver and kidney very good, but we wish that in the coarse anatomy of the former organ recent researches had been noticed to the extent of changing the posterior border into the posterior surface. The retention of the system of nine pairs of cranial nerves seems perfectly inexcusable, and from a practical point of view a serious defect. The publishers have, as before, added Holden's excellent Landmarks, which are the more useful from Dr. W. W. Keen's judicious additions. We are surprised that the statement that the surgeon can reach the beginning of the œsophagus with his finger is still allowed to stand.

To return to the work as a whole: we find that it still offers opportunity for severe criticism; but with all its defects it is a work that is, and will be, a favorite with the student. It is very practical, the plates for the most part are very good, and it is not too large. It is probably the best work to recommend to the average student.

T. D.

— The sum of \$50,000 has been voted for the erection of a physiological laboratory for Dr. Burdon-Sanderson at Oxford.

Medical and Surgical Journal.

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SOCIETIES FOR THE PROPAGATION OF CREMATION, AND THEIR HOBBY.

THE advocates of cremation in Italy and France who, if not very numerous, resemble the prohibitionists with us in another respect, as being very ardent and sometimes intemperate in season and out of season, have recently seized upon two occurrences to work their cause "for all it is worth."

The occasion seized upon in Italy was the wish of Garibaldi, as expressed in his will, that his body should be burned, a wish disregarded by his family. The occasion selected in France was the outbreak of the Egyptian epidemic of cholera.

At the time of Garibaldi's death much dissatisfaction was expressed by the cremationists at the violation by the family of the popular hero's testamentary desires in regard to the disposition of his remains, and this to the enthusiastic cremationist was unquestionably a sad blow, for nothing could so help to popularize the cause which the cremationist has at heart as the practice of his pet method for disposing of the dead upon the mortal tenement of a popular idol. The Italian cremationists, however, have taken counsel and heart of grace, and do not propose to be foiled so easily of their prey.

A letter has been addressed by the "Presidency of the Central Committee of the League of the Italian Societies for Cremation" to the Garibaldi family and to the President of the Council of Ministers of Italy, in which a somewhat long preamble of virtuous sentiments leads up to a resolve that all possible pressure be brought to bear upon the Italian government and the Garibaldi family to the end that "on the occasion of the first anniversary of the death of the great captain his body should be burned at Caprera." The letter is so good an exhibit of the eager agitator possessed with the one thing needful to renovate the living as well as the dead that we cannot forbear to give it entire:—

THE CREMATION OF THE REMAINS OF GENERAL GARIBALDI.

The Presidency of the Central Committee of the League of the Italian Societies for Cremation has addressed the following notice to the Garibaldi family and to the President of the Council of Ministers (of Italy):—

It is not very long ago since the whole of Italy was profoundly afflicted while deploring the loss of the great citizen whose actions were a memorable example of the deepest devotion to country, to liberty, and to truth.

Notwithstanding this grief there was universal applause at the news that the hero by an act of his last will had ordered that his remains should be burned as soon as possible after his death. Every one understood that this great act, inspired by the highest sentiments of our time, would exercise the greatest moral influence upon our people. Unfortunately these manifestations of general approbation were quickly followed by a feeling of astonishment and deep regret, not less general, on hearing that the family of the hero refused to carry out the solemn testamentary disposition of his own remains.

We will not discuss, nor will we even seek to know, the feelings that had induced the relatives of the deceased thus to resist his last wish. We would simply remark that if the laws of every civilized country provide that a due respect should be paid to every will which is well conceived and expressed, this duty becomes more imperative when the testator is a person worthy of the highest veneration, as well for his great actions as for his noble aspirations.

It ought to be said that Garibaldi, by the will in question, meant to strengthen in the minds of our people a great philosophical principle, violently opposed as it may be by the enemies of all civil progress, namely, that fire is the surest purifier of the remains of those we mourn, inasmuch as it gives to the elements which compose it the primitive conditions of all future organism. This principle, which was revealed to a few ancient philosophers by a happy intuition, is plainly demonstrated at the present time by strong arguments resting upon facts physical, chemical, and biological of modern science.

The vote passed at the last Congress at Modena by the delegates from the Italian Societies for Cremation is wise and praiseworthy in all its bearings. By this vote the Congress has expressed the desire that "on the occasion of the first anniversary of the death of the great Captain his body should be burned at Caprera." At the same time the Congress requested all Societies for Cremation to agitate this question in their respective localities, so that all citizens may be led to ask of the government and of the family of Garibaldi exact fulfillment of the will of the General.

The Committee of the Italian League of the Societies for Cremation therefore to-day feels it an imperative duty to appeal in the most urgent and solemn manner to sentiments of humanity of the family of Garibaldi and the wisdom of the government for the fulfillment of the last will and testament of the General, and also of the wishes expressed by the first Congress of the Italian Societies for Cremation.

In acting thus Italy will have accomplished a truly sacred and memorable act, while it is also in harmony with the fundamental principles of right, of morality, and of science.

PROF. G. CANTONI, *Senator*. DR. G. PINI, *Secretary*.

To those to whom, like ourselves, cremation is merely a neater, more expeditious, more agreeable mode of resolving the bodily remains into the original elements, and not necessarily a more prompt or sanitary way of disposing of the dead, such extravagance of language must seem serio-comic or pathetic according as the humorous or sympathetic predominates in the composition. Certainly in this country, and we believe scarcely less in older and more populous communities, it will be a long time before cremation becomes a burning question in other than a strictly literal sense.

In France the opportunity of which the cremationists availed themselves to ride their pet hobby was, as has been said, the outbreak of the cholera epidemic in Egypt. There, too, is a society for the propagation of cremation, with an active president. It seems the Municipal Council of Paris has upon several occasions memorialized the French government in favor of a law to authorize optional cremation, the last time so lately as last June. A deaf ear having been turned to these petitions, the council, immediately upon the breaking out of cholera in Egypt, requested the Prefect of the Seine to take any necessary steps with the government that the city of Paris might be authorized to construct crematory apparatus in each

of the three great cemeteries of the city, to be used only in case of an epidemic. This request was supported by one to the same effect from the President of the Society for Cremation to the Prefect of Police, in the expression of which the president informs the prefect, among other things, that "below the surface of the soil as well as above it the accumulation of dead bodies is the source of pestilential emanations against which cremation alone is capable of protecting the public health in times of epidemics in the large cities."

The Council of Public Health of the Seine, to whom this request was referred, encouraged by an adverse report of M. Brouardel, voted almost unanimously against granting it. The adverse report was based upon the impossibility of dealing with sufficient promptness with the large number of the dead resulting from an epidemic by any process of incineration, and upon the objection from the medico-legal point of view—the opportunity for poisoning with impunity being peculiarly tempting during periods of epidemics. M. Brouardel bases his calculations as to the number of bodies which can be daily incinerated by a limited number of furnaces upon the time required for cremation by the Gorini furnace, which is four hours. With the Siemens furnace, however, only one hour is required, and the process is much less expensive. With half a dozen Siemens furnaces one hundred and twenty bodies, at least, could probably be incinerated in the twenty-four hours. The objections from the medico-legal point of view would be more difficult to meet, at any rate in times of epidemics. Neither a preliminary autopsy, the preservation of necessary organs for subsequent examination, nor the appointment of officers to verify deaths, being practical measures under such conditions.

We suspect the agitation of cremation in countries like France and Italy goes hand in hand with a certain radicalism and hatred of the church, otherwise it is somewhat difficult to account for the extreme zeal of these societies. The Roman Catholic Church expresses a holy horror of the process. If, without going quite so far as Sir Henry Thompson and advocating cremation upon the utilitarian ground of the fitness of the ashes of our departed friends for fertilizing purposes, its functionaries could, with the enlightened Bishop of Manchester, "dissociate the resurrection from physical conditions," and teach "that it would be no more impossible for God to raise up a body at the resurrection, if needs be, out of elementary particles which had been liberated by the burning than it would be to raise up a body from dust, and from the element of bodies which had passed into the structure of worms," we suspect that there would be less interest in cremation and in societies for its propagation, in some quarters.

Now that we have in the Siemens furnace, as in operation at Gotha in Germany, a very cheap, expeditious, cleanly, and perfectly hygienic process for disposing of the dead, it seems a pity that those who prefer cremation should not be allowed the privilege; but it scarcely seems necessary to proselytize very eagerly

about it, for there is still ground enough for those who prefer burial, and cremation, no more than female suffrage or total abstinence from alcohol, is the one thing needed to rescue society from all its woes.

AMBULANCE SERVICE.

WE have heard much of late years of ambulance service in cities. The casualties of our modern life are sufficiently numerous to require organized arrangements to meet them as perfect in their way as are required by an army in the field. The size of the city, or rather the number of inhabitants and the daily number of casualties, must determine the ambulance requirements.

New York possesses, probably, the most perfect ambulance system of any city of the world. Each hospital possesses one or more ambulances, Bellevue has eight, which may be summoned at any hour of day or night, to attend to any accident within the particular district of each hospital. Both the fire and police telegraphs may be used to summon an ambulance and the accompanying surgeon. The ambulances also answer a general fire alarm, and use many of the arrangements adopted by modern fire departments to facilitate a speedy departure after the summons. The perfection to which the arrangements have been carried has excited very wide attention, and a halo of romance has been thrown about this service by magazine writers. Whether a system which allows any member of the police patrol to summon the ambulance is liable to abuse is a matter on which the public generally has never been informed. It must certainly allow an occasional impostor to feign a fit and force himself upon the attention of hospital authorities; but if it is so, the great good accomplished by so beneficent a system ought not for a moment to suffer. The necessity of organized ambulance corps is felt in other cities, and such a service has recently been inaugurated in Philadelphia. Dr. De Forest Willard, of the latter city, delivered an exceedingly interesting address upon the subject in April last, which has just reached us. In addition to much interesting and instructive information in regard to the construction of ambulance wagons and the transportation of sick and wounded, it contains a résumé of the service in other cities. In no other city of this country is there any approach to the perfection of the New York service. Generally the service is under the control either of the police or the health authorities. Of Boston Dr. Willard gives the following account:—

"In Boston there are three ambulances, one under the direction of the City Hospital, two controlled by the Board of Police Commissioners. The hospital ambulance is stationed at the City Hospital, the others, one at the north end, the other at the south end, of the city. These are used only to convey the wounded to the hospital, and are accompanied by a surgeon. They carry from five to six hundred per year to the institutions, and monthly reports are rendered to the superintendent. At the Massachusetts General Hos-

pital, an ambulance, with surgeon, will be despatched upon notice from physician, police, or other responsible source."

Such a showing is not inferior to the majority of American cities, but a little inquiry has convinced us that it was by no means a full account of the ambulance force of the city. Beside the two police ambulances at Stations 1 and 4 (Hanover and La-Grange Streets) there is a third, originally intended to be located in East Boston, which has never yet been assigned to its position, but which was some time ago completed, and is now ready for use whenever the necessity for it seems apparent. The vehicle, also, which was used at the City Hospital before it possessed the complete ambulance now in use is still in possession of the hospital, and does service as a light wagon for market and other purposes. It is almost always available in case of sudden emergency which require an extra large service.

The Marine Hospital has an ambulance which transports its patients to and from the hospital, and should be considered in enumerating the ambulances of the city. The Board of Health have also under their control at the Small-Pox Hospital an ambulance of ingenious and peculiar construction for the removal of small-pox patients. The hospital ambulance is not ordinarily accompanied by a surgeon, but by one of the attendants from the wards skilled in handling the sick.

The necessities for a complete service for the relief of wounded persons in Philadelphia,—and the same necessities exist to a greater or less degree in other cities, according to Dr. Willard,—are,—

(1.) Material for comfortable and speedy transportation, stretchers, wheeled litters, and horse-ambulances, to be provided by the city, and to be stationed, the former at the station-houses and depots, the latter at the hospitals.

(2.) Skilled medical care to be provided by the arrival in a few minutes of a surgeon with every means of appliance for the emergency, and a continuance of this care until the patient is safely landed in a place of rest, either at his home or in a hospital.

(3.) A thorough coöperation between the police and the hospitals.

(4.) Quick means of communication by special telephones between the police stations, hospitals, and offices of the visiting surgeons.

(5.) The strengthening of the financial condition of the hospitals by assistance from the municipal authorities and by private individuals. The former can be done by a yearly appropriation, as is the case in other cities, for the maintenance of ambulance horse, driver, and surgeon; the latter by the endowment by firms and by individuals of a hospital bed in which they can place their injured employees.

—The *Lancet* does not believe in the anti-hygienic effect of wood pavements. It says they have no more to do with the "serious affections of the eyes and lungs" ascribed to them by a sanitary journal than "Tenderden steeple has with Goodwin sauds."

MEDICAL NOTES.

—The Medical School of Harvard University celebrates the one hundredth anniversary of its establishment, and dedicates its new building on October 17th. The programme for the occasion is as follows:—

I. Address by the President of the University. Oration by Emeritus Professor Oliver Wendell Holmes. Presentation of a portrait of Professor Holmes, and a bust of Prof. Henry J. Bigelow.

II. Prayer by Rev. A. P. Peabody, D. D. Dedication of the new building, Boylston Street, to the purposes of medical instruction. Reception of subscribers to the building fund and invited guests by the Medical Faculty. Exhibition of the building.

—Dr. Fischer, of Trieste, has, according to *New Remedies*, made experiments with cellulose as a dressing for wounds, and has found it, when moistened with warm water or some medicated solution, and afterwards covered with an impervious fabric, to be a most excellent application in all cases where heat and moisture appear to be indicated. Its chief advantages are: (1.) It is absolutely free from substances capable of exciting putrefaction. (2.) It has a very low specific gravity. (3.) It produces neither eczema nor erythema upon the epidermis. (4.) It retains moisture and heat perfectly for more than twenty-four hours. (5.) It never adheres to granulating wounds on the surface of the skin. (6.) It adapts itself perfectly to the outline of the place of application. (7.) It is much cheaper than other materials heretofore used for similar purposes. Dr. Fischer has used, so far, only plain water or weak solution of carbolic acid or iodoform in the case of suppurating buboes, and has obtained uniformly satisfactory results.

—An extraordinary incident, in which an athlete showed great presence of mind and unusual muscular strength, happened at Cranachan Farm, near Dundee, the other day, and is reported in an English contemporary. Mr. Archibald Macdonald, one of five brothers who occupy the farm, was going over his land accompanied by the shepherd, and, when they were passing through a field in which cattle were grazing, a bull gave them chase. The shepherd ran, and left his master to his fate. Mr. Macdonald could not run, he having suffered much from rheumatism, and being now obliged to use crutches. The bull approached, and began to attack him, he doing his best to keep him at bay with the aid of his crutches. As good luck would have it, Mr. John Macdonald, an elder brother, bearing cries, ran to the rescue. In his hurry he forgot to bring any instrument with him with which to fell the brute; but it occurred to him that if he caught the bull by the horns he might keep him from doing more mischief till help arrived. Seizing the enraged animal by the horns, and using them as levers, with one supreme effort he gave a sudden twist to the head, dislocating the neck by his jerk, and, in a moment, the bull fell helpless at his feet. Mr. John Macdonald was at one time champion athlete of Scotland.

—The *British Medical Journal* warns the public that clothes which are quite new are especially liable,

under certain circumstances, which it fears are comparatively common and frequent, to be impregnated with the specific germs of zymotic disorders. It is a trade custom, which is especially in vogue in large towns amongst tailors, dressmakers, and others who make clothes, to employ largely the services of outdoor assistants. Under this system materials are "given out" at shops to outworkers, who take the fabrics home and there make them up into garments, which are finished, carried to the shop, and distributed to the customers. Such outworkers are usually poor persons, and they often live amid surroundings which practically make zymotic disease a perpetual circumstance of their existence. It can be no marvel that these poor assistants of tailors and dressmakers, with the payment of their toil often cut down to the lowest limit, and driven by the stress of poverty to work even when ill, sometimes infect or allow to be infected, through ignorance or recklessness, the materials on which they work. Scarlet fever and small-pox are the zymotic diseases which are especially apt to be spread under the conditions in question. This is so for the two following reasons: the subjects of scarlet fever and small-pox are very commonly able to do comparatively light work, such as needle-work, especially in their own homes, and even upon their beds, during a considerable portion of the infectious stages of their illness; and the emanations from the subjects of scarlet fever and small-pox, which are conspicuously, if not solely, contagious, namely, the desquamated epidermis in the case of scarlet fever, and the desiccated crusts in the case of small-pox, are *materies morbi*, which, relatively to the contagia of other zymotics, are very substantial, and especially liable to be caught and kept in the meshes of textile fabrics. The circumstances which cause this exposure in England are not altogether wanting here, though we believe that it is more common with us for the clothes to be made in the building where they are cut.

— We notice that at the recent opening of the autumn session of a medical college — so called — the President of the Faculty informed his audience that it was the only medical institution founded in the Christian religion, as all the members of the Faculty are required to be Christians, and the establishment of a pulpit is under consideration!

NEW YORK.

— A report on typhoid fever has been made to the Board of Health by Dr. Day, sanitary superintendent, in which he states that special attention has lately been given to this subject under the direction of the sanitary committee. All cases of the disease have been carefully investigated, and the families in which they occurred instructed in the use of disinfectants; while subsequent visits of inspection have been made. Typhoid fever has been slightly on the increase all through the year. Thus, in the first quarter of 1883 there were reported 120 cases, against 101 during the first quarter of 1882; and in the second quarter of 1883 83 cases were reported, against 67 cases during the corresponding period of 1882. In July of

the present year, however, there was a marked increase in the number of cases, the number reported being 93, against 40 during July, 1882; while in August the increase was still more noticeable, the number of cases being 244, against 96 during August, 1882. The report then continues as follows: "We must expect that this increase will continue as cold weather sets in and the city fills up with people from the country. A map of the cases, so far as prepared, does not show that the disease is confined to any particular locality, but is rather distributed generally over the city among those who do not avail themselves of early medical advice. The particular object of this communication is to call the attention of the Board to the neglect of proper disinfection in typhoid fever, as is shown in the reports of our inspectors. In several instances already, where there were no sanitary defects to account for it, five or six cases have occurred in one family. In these instances it has been found that the undisinfected excreta of the patients have been left for hours in the room where the sick and well have been together. . . . The vital point in the sanitary treatment of typhoid fever is the efficient disinfection of the clothing, bedding, and discharges of the patient, and whatever the Board can do to impress this upon the medical profession of the city, particularly at this time, will be an important factor in controlling the disease during the approaching winter."

In view of the present prevalence of the disease the Board of Health has issued an address to the public, which concludes as follows: "In the light of these vital needs the Board appeals to the citizens of New York to carry out in their own houses the advice contained in the report, and either destroy or thoroughly purify every article of clothing which has been in contact with typhoid fever patients, and empty at once all vessels used by them, and disinfect immediately after using. The Health Commissioners ask physicians and nurses to lose no opportunity to instruct the families of patients in these simple principles of health and protection of life, with a full sense of the responsibility resting on those who are charged with the personal care of the patients.

— At the last meeting of the Board of Health, Sanitary Superintendent Day presented a summary of the work performed by the summer auxiliary corps of visiting physicians. During their term of service they visited 43,915 houses, containing 198,932 families, prescribed for 6601 patients, and distributed 24,631 health circulars and 5195 tickets for the excursions of the Floating Hospital of St. John's Guild. Of the patients treated 3264 suffered from diarrhoeal diseases, 986 from diseases of the respiratory organs, 285 from contagious diseases, and 2086 from miscellaneous diseases.

— During the past summer the Floating Hospital of St. John's Guild made thirty-two regular excursions, on which 19,564 children and mothers were carried, and twelve extra excursions, on which 9625 were carried; making a total of 29,189 persons who were given the benefit of sea air. The Sea-Side Nursery of the Guild at Cedar Grove, Staten Island,

was also filled to its utmost capacity during the greater part of the summer.

— A farmer in Essex County has had a rather uncomfortable and, it is to be hoped, exceptional experience with some "fresh air fund" boys sent from New York during the summer. He had five of them at his house, and, according to the *Malone Palladium*, the first day after their arrival they hung his large pet Newfoundland dog to an apple tree in the morning, and in the afternoon placed his light wagon across the railroad track, where it was totally demolished by a train.

Miscellany.

THE TREATMENT OF PELVIC PERITONITIS.

DR. GOODELL, in a clinical lecture on a case of this disease,¹ thus describes his treatment. He advises to lay aside all small doses, and treat the case heroically

"In the first place give as much morphia as is necessary to relieve the pain, if you choose a hypodermic injection of morphia at first, but I prefer the use of opium by the rectum. I never give less than one grain of the aqueous extract of opium. It is a very good plan to add belladonna by the rectum, but do not put it in the same suppository as the opium. Belladonna is very good for the urinary tenesmus, and it also has an effect in lessening the inflammation. You have to push the opium, but cannot push the belladonna. I also give large doses of quinine, giving in bad cases ten grains every four hours until the patient is completely cinchonized and is deaf. I next put a large poultice of flaxseed or corn meal over the abdomen. If this is covered with rubber or a piece of brown paper greased with lard it will keep moist and warm for twelve or twenty-four hours, for the rubber or greased paper retains the heat, and the temperature in these cases is always elevated, running up to 103° F. or 104° F. in the evening, and down to 101° F. in the morning.

"After you have passed the brunt of the disease you must begin to use blisters. In this case the worst is passed, but her temperature is, I am sure, not under 100° F. I shall blister her. How shall we blister? Here is a woman who has strangury to a certain extent, and you do not wish to apply a blister that is going to increase the trouble. I always use the cantharidal collodion. I shall paint a blister in this instance three by four inches, putting on three or four layers, and then at once put over this a poultice. This is an almost painless way of raising a blister. I have never seen it produce strangury.

"Now, gentlemen, in a case of frank inflammation, such as that produced by a sound, where there is nothing of a concealed character, this treatment will subdue it, but if the peritonitis is produced by sponge tents you have a bad case to treat.

"I am sometimes called in consultation to a case of peritonitis by some of my students, and they tell me, 'I am giving quinine just as you direct us. I am giving two grains every three or four hours.' That is nothing at all. You should never give less than five grains.

¹ Medical Times, August 25th.

"You will find certain nervous symptoms present. The woman will be weak and trembling, ready to burst out crying. In such cases I very often give large doses of the bromides, from sixty to one hundred grains in the twenty-four hours.

"If you treat your cases in this heroic way, you will, in the great majority, cure them at the very beginning of the disease."

YELLOW FEVER AT GUAYMAS.

YELLOW FEVER has broken out with much virulence at the port of Guaymas on the Gulf of California. The mortality has been considerable in proportion to the population, and many of the more well-to-do have fled the town.

Guaymas is the terminus of the Sonora Railway, and thus of the Atchison, Topeka, and Santa Fé system.

MEDICAL EXAMINERS IN RHODE ISLAND.

THE proposed act in Rhode Island for substituting medical examiners in place of the old system of coroners, still obtaining there, was brought up for discussion at the last quarterly meeting of the Rhode Island Medical Society upon presentation of the report of the committee to which the subject had been referred. A report of the meeting appears on another page of this issue of the JOURNAL. No action was taken, and a further consideration of the question is anticipated at the next meeting of the Society.

We commented editorially upon some of the provisions of the act last week, and are pleased to learn that the Society will carefully consider all the details of the proposed law before giving its valuable support to it in the Legislature.

PULMONARY COMPLICATIONS OF ERYTHEMA NODOSUM.

PROF. GERMAIN SÉE, in a clinical lecture on Erythema Nodosum and the Pleuro-pulmonary Affections which sometimes accompany it (*Progrès Médical*, April 14 and 21, 1883, and *Practitioner*, August, 1883), comes to the following conclusions: (1) that erythema nodosum is a specific fever analogous to the exanthemata, and not a cutaneous manifestation of rheumatism; (2) that the affection, which is usually benign, may, like the exanthemata, be complicated with accidental disorders of the respiratory organs; (3) that pleurisy is the commonest complication, not unfrequently accompanied with broncho-pneumonia; (4) that this pleurisy seems in general to present no peculiar characters; (5) that in a fatal case the characters were the development of the pleurisy in isolated and distinct patches, the unusual thickness and abundance of the fibrinous exudation, and the small amount of fluid effused; (6) that the prognosis of the pulmonary disorder, like that of the primary affection, is favorable, though two cases occurred in which they led to a fatal result; (7) that the pleuro-pulmonary complications are not rheumatismal in origin any more than the primary erythema; but that they are directly referable to the specific principle or virus of the disease.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 15, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	589	261	27.39	13.03	12.02	3.67	6.18
Philadelphia.....	846,984	361	148	14.86	14.68	—	2.77	7.20
Brooklyn.....	566,689	242	124	30.68	22.26	16.80	.84	4.62
Chicago.....	503,304	245	131	36.00	10.80	26.65	6.85	7.65
Boston.....	362,535	182	77	32.94	14.82	19.22	3.29	6.58
St. Louis.....	350,522	152	71	31.54	8.54	12.49	1.97	7.88
Baltimore.....	332,190	160	75	33.75	9.38	8.75	3.13	10.00
Cincinnati.....	255,708	102	31	15.68	18.62	5.88	4.90	.98
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	—	—	—	—	—	—	—
Pittsburg.....(1883)	175,000	62	31	25.92	4.86	1.10	4.86	6.48
Buffalo.....	155,137	73	38	38.36	12.33	27.40	2.74	—
Milwaukee.....	115,578	55	27	21.84	10.92	6.48	3.64	7.28
Providence.....(1883)	116,755	45	15	44.44	13.33	11.11	11.11	—
New Haven.....(1883)	73,000	22	6	9.08	13.62	4.54	4.54	—
Charleston.....	49,999	38	16	23.67	18.41	10.52	2.63	5.26
Nashville.....	43,461	22	8	40.86	4.54	22.70	9.08	4.54
Lowell.....	59,485	40	23	37.50	10.00	35.00	—	—
Worcester.....	58,295	25	9	20.00	20.00	20.00	—	—
Cambridge.....	52,740	—	—	—	—	—	—	—
Fall River.....	49,006	28	14	17.85	17.85	14.28	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	19	9	21.06	5.26	5.26	10.52	—
Springfield.....	33,340	18	6	27.77	—	11.11	5.55	11.11
Salem.....	27,598	14	5	—	—	—	—	—
New Bedford.....	26,875	8	4	50.00	25.00	50.00	—	—
Somerville.....	24,985	13	8	45.90	7.69	22.98	—	—
Holyoke.....	21,851	12	7	25.00	8.33	8.33	16.66	15.38
Chelsea.....	21,785	7	4	28.56	14.28	14.28	—	14.28
Taunton.....	21,213	4	1	50.00	—	50.00	—	—
Gloucester.....	19,329	6	2	16.66	16.66	—	16.66	—
Haverhill.....	18,475	10	3	40.00	30.00	30.00	10.00	—
Newton.....	16,995	4	1	25.00	25.00	25.00	—	—
Brockton.....	13,608	2	0	—	—	—	—	—
Newburyport.....	13,537	6	3	16.66	16.66	16.66	—	—
Fitchburg.....	12,405	2	1	—	—	—	—	—
Malden.....	12,017	4	1	—	25.00	—	—	—
Twenty Massachusetts towns.....	155,433	63	28	40.82	9.42	37.68	3.14	—

Deaths reported 2635 (no reports from New Orleans and District of Columbia); under five years of age, 1178; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 711, diarrhœal diseases 334, consumption 293, lung diseases 177, diphtheria and croup 145, typhoid fever 92, scarlet fever 61, malarial fevers 28, cerebro-spinal meningitis 16, whooping-cough 17, puerperal fever 10, measles nine, erysipelas seven, small-pox two. From *scarlet fever*, Baltimore 12, New York 11, Philadelphia 10, Brooklyn seven, Chicago and St. Louis five each, Pittsburg and Buffalo three each, Boston two, Cincinnati, Fall River, and Somerville one each. From *malarial fevers*, New York eight, Brooklyn seven, St. Louis five, Chicago and Baltimore three each, Charleston and Nashville one each. From *whooping-cough*, New York seven, Chicago three, St. Louis and Cincinnati two each, Boston, Baltimore, and Milwaukee one each. From *cerebro-spinal meningitis*, Philadelphia four, Chicago, Milwaukee, and Springfield two each, Boston, Baltimore, Cincinnati, and Lowell one each. From *puerperal fever*, Brooklyn three, Boston two, Philadelphia, St. Louis, Baltimore, Buffalo, and Providence one each. From *measles*, New York five, Boston, St. Louis, Baltimore, and Pittsburg one each. From *erysipelas*, Brooklyn two, New York, Philadelphia, Buffalo, Charleston, and Lynn one each. From *small-pox*, Philadelphia two.

In 38 cities and towns of Massachusetts, with an estimated population of 1,083,823 (estimated population of the State 1,922,530), the total death-rate for the week was 22.45 against 21.21 and 22.96 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending September

1st, the death-rate was 19.8. Deaths reported 3278: diarrhœal diseases 407, acute diseases of the respiratory organs (London) 148, scarlet fever 110, measles 95, fever 56, whooping-cough 53, diphtheria 24, small-pox (London four, Birmingham two, Sunderland one) seven. The death-rates ranged from 13.1 in Halifax to 29 in Newcastle-on-Tyne; Bristol 15; London 17; Bradford 18.9; Sunderland 19.4; Leeds 20.1; Nottingham 21.2; Birmingham 21.3; Liverpool 24.8; Sheffield 25.3; Brighton 26.7; Leicester 27; Manchester 28.3. In Edinburgh 18.1; Glasgow 27; Dublin 23.4.

For the week ending August 25th, in 171 German cities and towns, with an estimated population of 8,610,255, the death-rate was 24.8. Deaths reported 4104; under five years of age, 2257; consumption 449, diarrhœal diseases 369, lung diseases 257, diphtheria and croup 129, typhoid fever 68, scarlet fever 58, whooping-cough 52, measles and r  theln 49, puerperal fever 20, small-pox (Breslau and Bremen one each) two. The death-rates ranged from 8.8 in Kiel to 37.5 in Munich; K  nigsberg 30.4; Breslau 35.8; Dresden 26.5; Berlin 28; Leipzig 28.9; Hamburg 21.4; Cologne 21.3; Frankfurt 22.1; Strasburg 22.5.

For the week ending September 1st, in the Swiss towns, there were 32 deaths from consumption diarrhœal diseases 27, lung diseases nine, diphtheria and croup five, whooping-cough three, puerperal fever three, typhoid fever two, measles one, small-pox one. The death-rates were at Geneva 8.2, Zurich 10, Basle 19.9; Berne 23.7.

The meteorological record for the week ending September 15th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.			Mean.				Mean.			Mean.			Mean.			Duration, Hrs. & Min.	Amount in inches.
Sept., 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.		
Sun., 9	30.185	54	63	47	66	35	63	55	NW	NW	W	14	20	8	O	C	C	—	—
Mon., 10	30.405	50	60	41	68	57	68	64	NW	E	SE	13	10	4	C	F	C	—	—
Tues., 11	30.360	54	61	44	87	69	86	81	SW	E	NE	2	12	7	F	O	O	—	—
Wed., 12	30.238	57	60	53	86	75	86	82	NE	NE	NE	7	13	8	O	R	O	—	—
Thurs., 13	30.125	59	63	55	100	100	100	100	NE	E	SE	7	14	4	R	G	O	—	—
Fri., 14	30.068	70	78	59	100	62	73	78	SW	NW	SW	2	6	4	G	O	O	—	—
Sat., 15	30.089	64	73	60	93	90	93	92	NW	E	NE	3	7	1	F	O	O	—	—
Means, the week.	30.210	58	78	41				79										20.25	.10

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM SEPTEMBER 14, 1883, TO SEPTEMBER 21, 1883.

CAMPBELL, JOHN, lieutenant-colonel and surgeon, medical director Department of the South. Granted leave of absence for fifteen days. Paragraph 2, S. O. 94, Department of the South, September 13, 1883.

ALEXANDER, CHARLES T., major and surgeon. On being relieved from duty at the United States Military Academy, October 1, 1883, to report in person to the commanding general, Department of the Missouri, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

ALEXANDER, CHARLES T., major and surgeon. Granted leave of absence for four months from October 1, 1883. Paragraph 1, S. O. 213, A. G. O., September 17, 1883.

GIBSON, JOSEPH R., major and surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report by letter to the commanding general, Department of the South, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

HORTON, SAMUEL M., major and surgeon. Relieved from duty in the Department of the Platte, October 1, 1883, and to report in person to the commanding general, Department of the Missouri, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

MEACHAM, FRANK, major and surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the commanding general, Department of the Platte, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

SMITH, ANDREW K., major and surgeon. Relieved from duty at Willet's Point, New York, October 1, 1883, and assigned to duty at the United States Military Academy, West Point, New York. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

TAYLOR, MORSE K., major and surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the commanding general, Department of the Missouri, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

WOLVERTON, WILLIAM D., major and surgeon. Relieved from duty in the Department of Dakota, October 1, 1883, and to report in person to the commanding general, Department of the East, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

APPEL, DANIEL M., captain and assistant surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the commanding general, Department of the East, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

BARTHOLOMEW, JOHN H., captain and assistant surgeon. Station changed from Fort Lapwai, I. T., to Vancouver Barracks, W. T. Paragraph 2, S. O. 123, Department of the Columbia, September 6, 1883.

MERRILL, JAMES C., captain and assistant surgeon. Relieved from duty in the Department of Dakota, October 1, 1883, and to report in person to the commanding general, Department

of the East, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

MAUS, LOUIS M., captain and assistant surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the commanding general, Department of Dakota, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

MUNN, CURTIS E., captain and assistant surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the commanding general, Department of the East, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

PATZKI, JULIUS H., captain and assistant surgeon. Relieved from duty in the Department of the South, October 1, 1883, and to report in person to the commanding general, Department of the East, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

PRICE, CURTIS E., captain and assistant surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the commanding general, Department of Dakota, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING SEPTEMBER 22, 1883.

BRYAN, J. H., passed assistant surgeon, detached from the U. S. S. Miantonomoh, and ordered to the Museum of Hygiene, Washington, D. C.

MACRUDER, A. F., passed assistant surgeon, detached from duty at Villefranche, France, and granted six months' leave, with permission to remain abroad during that period.

HALL, C. H. H., passed assistant surgeon, to be detached from the U. S. S. Ranger on reporting of his relief, and wait orders.

NEILSON, J. L., surgeon, detached from the Receiving Ship Franklin, at Norfolk, Va., and ordered to the U. S. S. Ranger.

CORWIN, WILLIAM A., surgeon, ordered to the Receiving Ship Franklin, Norfolk, Va.

WHITING, ROBERT, passed assistant surgeon, detached from the Receiving Ship Wabash, at Boston, and ordered to the Naval Hospital, Norfolk, Va.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The meetings of the Section for *Clinical Medicine, Pathology, and Hygiene* for the coming year will take place October 10th, and on the second Wednesday of each month thereafter during the winter. Members will please send the titles of any papers or communications they may desire to present at as early a date as possible to

ALBERT N. BLODGETT, Secretary,
86 Boylston Street, Boston.

BOOKS AND PAMPHLETS RECEIVED. — Annual Report of the Commissioner of Patents for the Year 1882. Washington: Government Printing Office. 1883.

Lectures.

CLINICAL LECTURE ON FAILURE OF SEXUAL DEVELOPMENT.*

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY PROF. T. GAILLARD THOMAS, M. D.

GENTLEMEN,—The little girl whom I present to you to-day is a clinical lecture in herself. Her name is Rachel W., and her parents are Polish Jews. She is eighteen years of age, and yet, to look at her, you would never imagine that she was anything more than a child of twelve. Physically she is, indeed, a girl of twelve; but chronologically she is a young woman of eighteen. The history, as derived from her mother and herself, is a very brief one: She is all the time sick, she says; complaining of weakness and more or less cough, and of pains in the head, back, chest, limbs, and lower part of the abdomen. In addition, her mother informs me that she has never in her life shown any sign of menstruation. It is true that, in answer to a leading question, she says that at a certain part of every month the pains mentioned are aggravated; but this statement must, I think, be received with some degree of allowance. When the girl speaks you cannot but be struck by the peculiar character of her voice. It is that of a boy of eighteen, whose voice has just undergone the change incident to the age of puberty, and is certainly a much more man-like voice than that of her mother.

These, then, are the facts of the case. The inference which we draw from them is, that that remarkable change which ordinarily takes place at puberty has not in this instance occurred; a conclusion which is confirmed by the physical examination, of which I will presently speak to you. What the special reason for the non-appearance of this change is we cannot say, though the ganglionic nervous system is probably at fault. At the age of puberty, as you know, the uterus in ordinary cases rapidly grows to three times its former size, and the ovaries also become much more fully developed. Ovulation then takes place, and when menstruation has once commenced, the uterus becomes still further enlarged. In a certain number of cases, such as you will meet from time to time in your practice, these changes do not take place. In the present instance the condition of the patient approaches that of cretinism, so commonly met with in some parts of Switzerland, except in regard to mental capacity, as this girl is perfectly intelligent. If nothing is done in the way of treatment, and possibly in spite of this, should it be attempted, she will be a little old woman at forty, no larger than she is now. Here there has been an abnormal development, so that the voice is that of a man. The mammae are also like those of a man, and her form entirely lacks that rotundity and size which we ought to find at her age. The condition of this patient is, indeed, that of a woman from whom the ovaries had been removed before the age of puberty. There are, however, a few rare exceptions, in which the individual, while having the vagina, uterus, and ovaries perfectly developed, is yet altogether like a man in other respects.

I will now show you upon the blackboard what the

vaginal examination revealed here. I found that the hymen offered no obstruction whatever, as one would naturally expect in such a case, and, passing my finger up the small vagina, I found at its upper extremity an acorn-like uterus, such as I now depict for you. By means of conjoined manipulation I then endeavored to determine the size and position of the ovaries, but found this quite impossible. Nothing is to be inferred from this, however, as it is often the case that the ovaries when of normal size, and even when somewhat enlarged, cannot be found at all by the examiner. You should always receive with considerable allowance the statement of any one who says he can map out the ovaries with perfect ease. He may imagine that he does this; but the chances are that he is quite mistaken about the matter. In certain favorable subjects the ovaries, when of normal size, can be thus mapped out; but in a very large number of cases this is utterly impossible. Here, then, we have an infantile, undeveloped uterus, with probably the same condition of the ovaries.

What is the prognosis in a case like this? Some fifteen or twenty years ago the treatment of such cases received a great deal of attention, and the gynecologists reported quite a number of successful results. I myself was one of those who did so, and who felt sanguine of the same good results in other cases. Since then, I must confess, I have lost a good deal of faith in regard to the matter, for I have found by experience that it is only in a very limited number of cases that treatment is at all satisfactory. While, however, I should be by no means hopeful in the case of this girl, I certainly think that she ought to have the benefit of a special course of treatment. It would be easy enough to say that as nature had failed to do her part, there would be no use in trying to accomplish anything here. But instead of taking such a hopeless view of the case, which would condemn the girl to a life with very little happiness in it, I would advise that at all events the attempt should be made to spur on nature to carry on the development which for some reason she has hitherto neglected in this case. If at the end of three months of persevering and systematic effort no progress had been made, I should then think it useless to go on with any further treatment.

I shall, therefore, endeavor to persuade the mother to let her daughter enter my service at the Woman's Hospital, and I will now give you an outline of the plan of treatment that will be adopted in case she gives her consent. In the first place you will understand that if by any means, by directing nutrition to the uterus, we can enlarge the organ, a considerable amount of good will be accomplished; and if, in addition, the ovaries can be excited by reflex irritation, there will be some ground of hope for a successful result. In my private hospital there is at present a young girl of seventeen who has improved in the most wonderful manner under treatment, and in whom the menstrual flow can now be brought on regularly every month. The plan of treatment that I pursue in such cases is as follows: I begin by inserting into the uterine canal a very small sea-tangle tent, which I keep in position by tamponing the vagina. This is to be removed in twenty-four hours, and in two or three days a slightly larger tent is put in. After a time two or three small tents may be used together, and in this way we can really make the uterus grow by producing an afflux of blood to the organ. It is, to be sure, a very clumsy way of

* Reported for the Boston Medical and Surgical Journal.

accomplishing this; but as it is the only way that I know of, I am content to practice it. As time goes on we can use larger tents, and if we really succeed in increasing the size of the uterus somewhat, a glass stem should be introduced into the cavity and supported by a cup pessary. This stem should be worn both day and night, but should be taken out once in every three or four days. At the same time means should be directed to the improvement of the general system. Highly nutritious food is of the first importance, and the patient should have not three, but six, meals a day. This is what the young lady of whom I have just spoken is getting. That is, she has her three regular meals, and, in addition, a tablespoonful of malt extract in a tumbler of milk midway between breakfast and luncheon, between luncheon and dinner, and when she goes to bed at night. Such patients rarely have an appetite, and they must really be forced to eat, although not exactly in the way in which fowls in course of artificial fattening in Europe are forced. Some of you may have seen at the *jardin d'Acclimatation* in Paris the ingenious system of M. Martin, by which fowls, in consequence of forced alimentation given regularly every three hours, are doubled in weight in eighteen days; while in a barn-yard they might not fatten in six months. In the matter of feeding such patients it is almost always necessary to combat the will, and especially in regard to the matter of milk, which at first they all say that they cannot possibly take. Girls of this class are always anæmic, and require a large amount of nourishment. Look at the face of the one now before you, and see how pallid it is. Very likely she takes a cup of tea and some bread for her breakfast, some salt meat or fish with potatoes for her dinner, and tea and bread again at night. If she should enter the hospital special attention would be paid to her diet, and I think it would be found that she would gain at the rate of two or two and a half pounds a week. But, besides, it would be necessary to look after the condition of her skin, which now feels more like iced parchment than anything else that I can think of. The impression which it gives one is precisely that of the skin of a man suffering from cirrhosis of the liver. To bring about a healthy condition of the cutaneous surface she would be given three Turkish baths each week, and on the days when she did not have a bath massage would be thoroughly applied by a professional manipulator. In this way the entire skin would be stimulated to action, and passive exercise given to every muscle of the body. In addition, she would be required to exercise with gymnastic apparatus every day after the bath or the massage. In private practice it is, of course, not so easy to carry out such a course of treatment as in a hospital; but it should be imitated as far as possible, and if the mother of the patient is intelligent, all the principal difficulties in the way can be overcome. What, then, have we done so far? In the first place we have improved the blood state of the patient; secondly, we have improved the cutaneous circulation and given tone to the nervous system; and, thirdly, we have to some extent developed the uterus.

We now begin to add something to the treatment, and that is, electricity. The galvanic battery, I think, is the best for the purpose, and a cup electrode should be placed over the cervix uteri while the other electrode is carried to the nape of the neck, and then down along the spine. In the same way an electrode should be placed over the ovaries in succession, so as to stim-

ulate these organs also by direct irritation. It may be that in the course of three months after the commencement of the treatment an erratic hæmorrhage from the uterus will come on, and this is to be regarded as a most encouraging symptom, for it is almost sure to be followed by others. In my private case, as I said, I can now bring on the flow regularly every twenty-eight days, and the young lady is so greatly improved in every way that she and her friends are abundantly satisfied with the result, and she will now soon leave the hospital. She certainly looks like an entirely different person from what she did before the treatment was undertaken. For the present, however, she will each month come to my office three days before the time for the menstrual flow, when by means of a Peaslee uterine sound (which I prefer because it has a very blunt point), covered with rubber with the exception of the last two or three inches, a galvanic current will be applied to the fundus. The ovaries will also be stimulated by the same agent. On the following day, and again on the day when the flow is expected, this application will be repeated. In one case the procedure resulted in pelvic cellulitis; but as this is the only instance out of a very large number of patients in whom I have used this course of treatment, I think there is very little danger of this occurring.

It is very evident that something ought to be done for this girl. It is very easy for the physician to screen his conscience under the shelter of a prescription in such cases; but in every instance of the kind an honest and persevering effort ought certainly to be attempted. If at the end of three months, however, there should not be any indication of ultimate success, it would scarcely be worth while, as I have intimated, to carry the trial any farther. My private case, to which I have so often alluded, has proved a brilliant success; but this, you must understand, is the exception rather than the rule. The first case which attracted special attention to this subject in this city was that of a young lady in high life who, in addition to her other troubles, suffered from epilepsy. A well-known gynæcologist undertook her case and succeeded in bringing on the menses; while the epilepsy, greatly to the satisfaction of the patient and her friends, almost entirely disappeared in consequence. Of course, the success achieved in this instance induced many other physicians to adopt the plan of treatment in similar cases. The reason that I do not have the same confidence in it that I did once is, that while in a few cases the method is successful, there are a great many others in which the result is negative. To illustrate how changes take place in medical opinion, I may mention that not longer than ten or twelve years ago sterility was almost universally treated in this city by cutting open the neck of the uterus. You all know the history of the operation which was introduced by Sir James Y. Simpson, of Edinburgh. In only one case, perhaps, out of five hundred, it was successful, and so it gradually fell into disuse, until it is now almost entirely abandoned. It has, indeed, been given up more than I think it really ought to be, as there are a certain number of cases in which it seems to be legitimately called for. This is an important case, as it is a type of a class that you will meet with occasionally in practice, and I have dwelt upon it at considerable length for the reason that I may not have the opportunity of presenting another similar one during the course, as such cases are by no means very common.

If the patient will go in the Woman's Hospital she will be given the benefit of a systematic course of treatment such as I have described, and I will promise to report the progress of the case to you at least once a month while she remains. It is very doubtful, however, whether she will consent to enter the hospital, as persons of her race are apt to be strongly prejudiced against such institutions, and, indeed, against accepting charity of any kind. While speaking of her race, I may mention that it is very rare to find the condition here present in Jewesses, among whom the age of puberty, which, as you know, varies in different races and nations, occurs ordinarily at a very early period.

Original Articles.

ON CERTAIN UNRECOGNIZED FORMS OF LEAD-POISONING; AND ON THE POSSIBILITY OF MISTAKING BISMUTH FOR LEAD IN URINE ANALYSES.¹

BY JAMES J. PUTNAM, M. D.

A NUMBER of cases have come to my notice within the past few years in which an examination of the urine has shown the presence of lead, while the symptoms and clinical history were not such as are usually considered characteristic of lead-poisoning, in fact simulated those usually classed as other types of disease. Three of these cases were diffused forms of chronic interstitial myelitis, and two were of the character of cerebral neuroses.

Besides these I have seen two interesting cases with Dr. F. Minot, one presenting some of the symptoms of spastic paraplegia (so-called lateral sclerosis), and the other being a form of diffused poliomyelitis anterior.² In both of them the improvement under iodide potassium seemed to justify the diagnosis, although in the latter case syphilis was recognized as a possible cause of the disease. It is, of course, nothing new to say that lead-poisoning may simulate other diseases, or that any one or all of the classical symptoms may be wanting.

The likeness and unlikeness of some forms of the so-called encephalopathy to progressive paralytic dementia (Monakors and others), to intra-cranial tumor (Byrom Bramwell), to hemiplegia from cerebral hæmorrhage (Raymond and others), has repeatedly been commented upon.

So far as I know, the first case in which lead was supposed to have given rise to symptoms simulating any other form of spinal disease than the poliomyelitis anterior, which some observers believe to underlie the typical atrophic paralysees, is the one, already referred to, which was reported by Dr. F. Minot, of Boston, before the Medical Improvement Society in 1881, and recorded in the Boston Medical and Surgical Journal for the same year.

At the meeting of the Neurological Society in 1882, Dr. Webber read a paper upon the pathology of lead-poisoning, and again brought forward the fact of the relation between lead-poisoning and chronic sclerotic affections of the spinal cord, and reported a case also

resembling in some respects the so-called lateral sclerosis.

Although the idea is not new, therefore, that lead may turn up when least expected, as a cause of obscure forms of disease of the various tissues of the body, yet it is evident that clinical history of the disease is in need of further study. In the first place we require a closer investigation of symptoms in cases where lead is manifestly present; and in the next place it is necessary that a large number of routine examinations of the urine should be made, under due precautions, especially in obscure spinal cases, to ascertain with what frequency lead is liable to be present.

In none of the cases referred to in this paper were blue line on the gums, colic, marked emaciation or discoloration of the skin, characteristic localized atrophic paralysees, or typical cerebral symptoms present, except where the contrary is specified; and the diagnosis was established solely through the examination of the urine, after the administration, for a few days, of iodide potassium.

It is of course not certain that the symptoms observed were really due to the influence of the lead which was found, though from what we know of the liability of lead to set up chronic degenerative inflammations in the various tissues of the body,³ this inference must be admitted to be a fair one.

I shall append at the end of the paper a sketch of the cases referred to, and proceed now to speak of the precautions necessary to a satisfactory examination of the urine for lead.

All the chemical work of the investigation was done in the laboratory of the Harvard Medical College, under the supervision of Prof. E. S. Wood, and the final tests were made by his own hand. The more recent analyses were made by Professor Wood's assistant, Mr. J. W. Perkins, who has been giving especial attention to this subject.

The detection of this metal in the urine is by no means without its difficulties.

Neubaur and Vogel,⁴ writing in 1871, say laconically, that it is sometimes present, but that the analysis is difficult and not always successful. The quantity present, especially when no iodide of potassium is being taken, and also after this drug has been taken uninterruptedly for more than a few days at a time, is, according to M. Pouchet,⁵ not often more than 0.001 to the litre, rising considerably when iodide of potassium is first given, or when its use is suspended for a time and then again resumed. The quantity of urine to be analyzed should therefore be at least one quart, and should be collected during the administration of iodide of potassium, given either for the first time or after an interval of repose.

The liability of the reagents to contain lead is well known. It applies not only to the sulphuric acid and ammonia, but also to the ordinary filtering paper, though not to the so-called Swedish paper.

It is needless to say that Professor Wood was fully alive to these dangers, and took every precaution to avoid them, with what success is shown by the fact that in parallel analyses, which were constantly being made, no lead was found. One additional and important source of possible error suggested itself to him,

¹ Read at the meeting of the American Neurological Association, June, 1893.

² Reported by Dr. Minot at a meeting of the Medical Improvement Society, Boston Medical and Surgical Journal, August 16, 1883.

³ See Rudolf Maier, Exper. Studien über Bleivergiftung. Virchow's Arch., vol. xc., p. 455.

⁴ Analyse des Urins.

⁵ Cited in the London Medical Record, November 15, 1880; also by Dr. Hills, Boston Medical and Surgical Journal, vol. cv., p. 125.

however, during the course of this investigation. The final test used for lead depends, namely, on the formation of the yellow iodide of that metal after the addition of iodide of potassium. But the same reagent produces also yellow iodide of bismuth if a compound of the latter metal be present, an important consideration in view of the frequency with which that drug is used in the treatment of common forms of dyspepsia. Bismuth is always given in the form of a basic salt, subnitrate or subcarbonate, and is not absorbed to any great extent, its therapeutic effects being due to its local action upon the mucous membrane of the alimentary canal. A small proportion of this compound is, however, changed into a soluble form and absorbed usually, if not always, and has been found in the urine. How long it continues to pass off in this way has not been shown, but Bergeret and Mayençon¹ found traces of it in the various tissues of a rabbit eight days after the administration of a few grains, and found also traces of it in the human liver and kidneys five days after the administration of one gramme.

For the sake of investigating the point further, I took myself a quantity of the subnitrate of bismuth, varying from thirty grains to forty-five grains, daily for two weeks. At the end of this time, while still taking the drug, my urine (about two quarts) was examined by Mr. Perkins according to the method habitually used in the lead analyses, and a final reaction was obtained which was practically identical with that observed when lead is present. That lead was not present, however, had been shown by a preliminary examination of the urine, which had been prepared for by taking iodide of potassium in the dose of fifteen grains daily for several days. About twenty-four days after ceasing to take the bismuth I again took iodide of potassium, and collected two quarts more of urine during the next two days. This was analyzed, and a trace of bismuth was again found to be present.

It would seem an easy matter to separate lead and bismuth, and a method will no doubt be found for doing so, but the quantities are so small that this is decidedly difficult, and the most reliable way of avoiding this error is to make sure that the patient has taken no bismuth within a considerable period before the examination for lead is made.

Of course the discovery of this source of error throws doubt upon the reality of the assumed lead test in some of my former cases, and I was obliged to omit two interesting ones on that account, and cannot prove that in certain of the others bismuth had not been taken within the time necessary for its elimination. In others, however, among which Dr. Minot's two cases are to be reckoned, it was certain that this had not been the case.

Another source of error of which Dr. Wood has been in the habit of speaking is that if the urine be allowed to undergo alkaline fermentation in bottles made with lead glass, the glass may be decomposed and lead dissolved by the alkali. To avoid this the urine should be slightly acidulated with acetic acid if it is to be kept any length of time.

I append, with Professor Wood's permission, his method of analysis for lead.

The urine is first evaporated to dryness, then fused in a crucible, with the addition of a little pure nitre, till it becomes white. The crucible is then cooled, and

dilute HCl added, hot, to extract the residue after ignition. It is then filtered, and the filtrate treated with ammonia to alkaline reaction to precipitate the phosphates and iron. Sulphide of ammonium is added at the same time, which throws down the sulphide of iron and lead. This is washed three times by decantation with hot water, then water is added, and the whole acidified with HCl, and allowed to stand until the next day. It is then filtered through a small filter, and the residue washed. A little pure (free from iron) nitric acid is then added, drop by drop, by which the sulphide of lead, if present is dissolved, and carried through as nitrate of lead. This is collected in a watch glass, evaporated to dryness, and the final test made (as aforesaid) by the addition of a drop of water and a crystal of iodide of potassium.

The following is a brief outline of the cases to which I have referred:—

CASE I. Woman in middle life. First complaint, "numbness" in all four extremities, with marked debility, severe and progressive anæmia. Six months later, paraparesis of lower extremities, of such a nature as to indicate slight, diffused impairment of all the functions of the spinal cord. Gradual increase of anæmia and paralysis. Death after some months.

No autopsy.

It was impossible to affirm positively whether patient had taken bismuth during course of her illness or not. There had been no typical signs of lead-poisoning, but an examination of the urine had shown the presence of "considerable lead."

CASE II. Man,² fifty-five years of age, captain of police by profession; always robust and well. No syphilis, no exposure to cold. Two months before examination, attack of pain in chest, with slight difficulty in breathing. Soon after, sense of numbness and heaviness in the legs, and for a time progressive difficulty in walking. No atrophy nor material impairment of sensibility, nor any disorder of micturition.

"Considerable lead" was found in the urine after the administration of iodide of potassium. The patient had been in the habit of drinking more or less from a lead-lined tank in his office. Dr. Fuller stated that he had taken no bismuth for several weeks before the examination, and then only a small quantity, perhaps a drachm in all.

The following case was seen by me at the Massachusetts General Hospital in consultation with Dr. B. S. Shaw, who kindly allows me to report it. Although the condition of the hands would in itself have suggested the diagnosis, yet the symptoms referable to the legs are noteworthy, the more so that they resembled (in respect to the exaggerated knee-jerk) some of the cases reported by Drs. Minot and Webber.

CASE III. Patient is a restaurant keeper, fifty-seven years of age. For past year has suffered from severe pain in sacral region, increased by sudden jar; also from excessive constipation, with occasional attacks of diarrhoea, nausea, and vomiting. Recently there has been some difficulty in retaining urine; slight numbness in feet and legs, and impairment of strength in them. There is exaggeration of knee-jerk and plantar reflex; slight tremulousness of hands and tongue; some wasting of interosseous muscles of hands and of thenar muscles; no blue line on gums. Urine contains no albumen, but (after administration of iodide of potassium) "con-

¹ Cited by H. C. Wood, *Theraps. Mat. Med. and Toxicol.*, edition of 1874, page 38.

² Seen in consultation with Dr. Fuller, of Charlestown, who kindly allows me to report the case.

siderable lead." Improvement under treatment by iodide of potassium.

The following cases, although not of spinal origin, are certainly not without interest:—

CASE IV. A German lady, rather stout, but not unhealthy in appearance, was seen by me two years ago in consultation with Dr. Ruddick, of South Boston. The symptoms of which she complained were mainly vague dizziness and obscure sensations of discomfort in the head, ringing in the ears, and dyspepsia. The ears were examined by Dr. C. J. Blake, and some middle-ear trouble found, which he succeeded in removing in a measure, with partial relief to the symptoms.

Although the classical symptoms of lead-poisoning were absent I had the urine analyzed, and lead was found. There was no syphilis nor nephritis.

The water which this patient drank ran from the street main to the house through a lead pipe. I asked her to send me a gallon of this water, and this was found on analysis to contain a relatively large quantity of lead, a good deal more than is usually found in Cochituate water under these circumstances. It cannot, unfortunately, be positively asserted that this patient had not been taking bismuth.

Apocryphos of the contamination of water from lead pipes, I will mention a point of practical interest spoken of to me by a plumber with whom I have talked. It is, namely, well known that hot water is more apt to dissolve lead than cold, but it is, I think, not generally realized that this fact makes it objectionable to run hot and cold water-pipes side by side through the house, especially where the latter carry water for drinking purposes. The plumber, Mr. W. H. Greenleaf, assures me that the cold-water pipes under these circumstances are apt to be considerably corroded.

CASE VII. A man, thirty-two years of age, a gas-fitter by trade, came to the Massachusetts General Hospital, Out-Patient Department, in September, 1882, complaining mainly of sense of numbness and pricking of hands and feet, rather worse during the day, but felt also at night, and sometimes remitting altogether. When this "numbness" was severe the legs felt heavy and helpless. He complained also of headache; of attacks of dizziness, without loss of consciousness, recurring every day or two; of twitching of the muscles, mainly left arm and leg; and of a sense of coldness and trembling throughout the entire left side. The hands could be thrown into full extension, even with the fingers spread and extended, but when in this position some trembling was seen, and at a later period a careful electrical examination of the extensor muscles of the fingers showed a marked diminution of reaction to the faradic current. There were no distinct spinal symptoms, unless somewhat delayed micturition at times be such, and the heart and arterial system appeared normal. The complexion was pale and sallow, and the conjunctivæ of yellowish hue. Examination of the gums revealed the presence of a faint "blue line," and examination of the urine after iodide of potassium had been taken for a few days showed the presence of "much lead." Possible partial causes of his condition were syphilis, since he had had a chancre, without secondary symptoms, ten or eleven years before, and abuse of tea, coffee, and tobacco. His improvement under treatment has been very great in all respects, but the urine still contains lead, or did a short time ago.

Generalized tremor of the muscles, without paralysis, is a symptom which, though rather rare, is well recognized,¹ but when so slight as in the following case, and so completely unattended with characteristic symptoms, the difficulties in the way of diagnosis might be considerable.

CASE VIII. An athletic and previously healthy medical student came to me some months ago complaining of very slight trembling of the muscles all over the body, though noticeable to any one else only in the hands with the fingers in extension. No loss of power was discoverable, nor other symptoms of any kind, except some obscure signs of general debility, referable to confinement at work.

As a matter of precaution the urine was examined for lead, and a "considerable quantity" was found.

Subsequently a very careful examination with electricity revealed a diminution of irritability of the extensors of the fingers to the faradic current, though so slight that its presence could hardly be asserted with confidence.

No source for the lead could be discovered.

DIETETICS FOR THE SICK.²

BY CHARLES M. SELTZER, M. D.

IN presenting this paper it is but justice to state that it has been prepared during the leisure of the past week as a substitute for one by another member who was unable to keep his engagement. The subject has been selected more from the hope of eliciting some practical ideas, and a desire to emphasize its importance, than to announce anything new, or to exhibit the best paces of a hobby. Close attention to the methods of our most successful general practitioners convinced me that in dietetics was their stronghold. At the same time there was plainly to be seen a distressing lack of knowledge as to variety of foods, and the preparation of them. In order to find out whether there was a practical remedy for these two great faults, I have gone over a thorough course of preparation of diet for the sick, under the instructions and guidance of Mrs. S. T. Rorer, in whom are combined the practical attributes of cook, chemist, physiologist, and nurse, and I can safely say that if every member of this Society were to do likewise their *armamentarium*, success, and self-satisfaction in the practice of medicine would be increased many fold.

It would be almost an endless task to discuss the literature of this subject. Let us condense the opinions of physiologists, chemists, hygienists, and all others in authority, by stating that food is divided into nitrogenous or albuminous, hydro-carbous or starch, sugar, and fats, and mineral or the various salts of the alkalies. Of these the nitrogenous and minerals are the building materials, and the hydro-carbous are the heat and force producers. Food may also be classified into liquid, semi-solid, and solid, and as the sum total of digestion is a matter of absorption and assimilation, it follows that the more liquid or dissolvable food is the more readily will it be absorbed; hence this is the form to be chosen when it is desirable to obtain nourishment at the least possible expense of organic action.

¹ Vide Axenfeld and Wuchard, l. c., page 663.

² Read before the Philadelphia County Medical Society, September 12, 1883.

There are also conditions in which bulk and solidity are necessary, and here we select the semi-solid or solid food, or even indigestible matter.

Nitrogenous food, in its natural combination with mineral matters, is mostly made absorbable by stomachic digestion. It rebuilds the tissues, and the waste and refuse are excreted by the kidneys and skin as urea and uric acid and its salts.

Hydro-carbons are digested in the mouth and small intestines, are burnt up by union with the respired oxygen, thus supplying heat and force to the body. The waste and refuse are excreted by the lungs and bowels.

About three ounces of nitrogenous and twenty ounces of carbonaceous food are necessary to sustain the life of an adult man in idleness. With these epitomized facts in mind let us consider the importance and use of dietetics in the treatment of disease. The importance has been signalized by Bence Jones, who has said that the effect of diet is far beyond any known remedy. This fact has been so well known for the past century that volume after volume has been written on "dietetics," "diet cures," etc. A few of these have become standard works of authority because of their scientific and exhaustive treatment of the subject, while hundreds of others have had but an ephemeral existence. All have had to reiterate the same facts, because very few new ones have been learned, and, aside from the knowledge of artificially digested food, the student of a hundred years ago knew as well as the student of to-day about what diet was necessary for the sick. True, theirs was an empirical teaching; they knew nothing of the physiological actions of diastase, pepsin, and pancreatin, but they were all the more practical for that. Our present scientific reasonings on digestion are but the formulation of rules and theories for very old facts. The importance of the subject is made more manifest when we consider how much of the sickness that we are called upon to treat is the result of some error in eating or drinking, and as "removal of the cause" is the first step towards the promotion of recovery, it is easy to perceive how essential it is to know what constitutes proper and improper diet. Life depends upon diet, and the restoration of health depends upon the same principles as its preservation. Disease is the result of the violation of the laws of health, hence the first step towards recovery is to reestablish those laws, and as the material for repair and support must come from diet, we, as thorough physicians, should have a complete *practical* knowledge of dietetics and a proper appreciation of their curative value. But almost a decade of experience among physicians compels me to acknowledge that this is not the case, and that the most lamentable deficiency is in the practical application of the subject. Nature's simple and easily understood remedies are either lost sight of or ignored in the blind endeavor to find a medical specific for every human ill, or to establish an ideal notion, theory, or pathy. For the treatment of chronic affections some good points may occasionally be gained by even observing the *modus operandi* of quacks, homeoquacks, and proprietary medicines, for, in connection with either a depurative or inoperative preparation such dietetic and hygienic directions are almost invariably insisted upon as would in themselves relieve temporarily, and perhaps permanently, some of the most obstinate cases.

The methods of dietetic treatment of diseases are as

various as are the ills that flesh is heir to, but all of them contain some of the following principles as essential features: In acute diseases rest is of primary importance; it is the fundamental principle of their medical and surgical treatment, and the same idea must be carried out in dietetics by remembering what part each organ serves in absorption, assimilation, and excretion, and by avoiding such food as would cause the performance of that function. Of course this plan is only to be pursued while the disease is advancing, and as soon as recovery begins there must be a gradual return to a promiscuous diet, very little at first, just enough to slightly exercise the crippled organ, using as great care as we would in instituting passive motion in a limb that has been fractured. Nature enforces this principle by the loss of appetite that marks the onset of nearly all acute diseases. The dietetic rest of an organ does not necessarily imply a depletory diet, for while it is non-active other organs may be made to perform a compensatory amount of work, and thus sustain or even increase the patient's vitality, so great is the versatility of our organic functions. It is upon this idea that we must act when we obey the command of Graves to feed fevers. In chronic diseases—those in which the natural course is direct from bad to worse until death or some interposing process puts an end to them—every organ must be made to do its utmost; the whole system must be awakened to the threatening destruction. Herein lies the broadest field of action for our subject. No time should be lost; food should be administered as frequently as assimilation and proper amount of organic rest will allow; the appetite should be kept active by using liquid, semi-solid, and solid food, prepared in such a variety of ways as to allow no charge of monotony or disgust. Surprise is frequently a useful element. Instead of leaving the patient to vacillate over his or her likes and dislikes, the nurse should be privately instructed how and what to prepare for each time, and how to serve it in the most appetizing manner. A valuable aid, usually lost sight of, is condiment. Think but for a moment how a savory dish will sharpen our appetites while in health, and I am sure you will perceive its stimulating influence upon a debilitated patient, to whom the flat and insipid preparations usually offered are loathsome or even nauseating. This disgust might frequently be avoided, and the amount of prescribed medicine be lessened. Many of the bitter tonics and carminatives of our *materia medica* are the same as are used in cookery, and are none the less efficacious in a palatable dish than in the nauseous pill or draught. Therefore let the delicate aroma of herbs, celery, and bay leaves pervade the soups; use India curry on starchy foods, and when desirable add *capsicum*, *piper nigrum*, etc., to animal broths and substances. In so doing, if necessary, you can satisfy the qualms of your professional dignity by remembering that in catering to the palate you reflexly stimulate the organs of digestion.

Some articles of diet may be administered simply for their curative effect. A five-ounce cup of strong coffee contains about sixty-six grains of extract, or an equivalent of about two grains of caffeine—quite sufficient to relieve a neuralgia, or a headache and sick stomach after a dose of opium. Beef tea, made red-hot with red pepper, is the very best treatment for delirium tremens. A patient to whom I once administered such a dose, made so strong that I would not

have dared to taste it myself, afterwards told me that it was the most refreshing and cooling drink he had ever taken. A London surgeon to the police told me that he had treated a hundred and fifty cases of delirium tremens with this remedy alone, and had not lost one. The use of chloral in these cases is criminal, and many a death certificate of "delirium tremens" ought to be "heart failure from chloral poisoning." Mucilaginous teas and drinks made from gelatine, isinglass, Irish moss, and flaxseed are very soothing to any inflammation within the digestive track. Green vegetables are necessary to cure as well as prevent scurvy.

An old practitioner, who had spent his early professional life in the country, told me that when he first commenced practicing he used all the ordinary remedies in typhoid fever without any satisfactory results, until the introduction of turpentine by the late Prof. George B. Wood. In it he soon discovered a useful ally, not so much in the drug *per se*, but because convenience and time compelled him to use a thick flour gruel as a vehicle, and the patients were nourished sufficiently to live through the attack.

In the science and art of preparing sick diet there is a most lamentable lack of knowledge, especially among physicians. They know the preparations by name, but not by nature, and the only way to learn the latter is to don the apron and take a practical course from a practical and scientific cook. Such a course was inaugurated last winter in this city and in Boston with a very satisfactory result. The prospect for this season in this city is that the course will be very well attended. It is the only way to learn. I could read you receipts by the score, but it would be as useless as reading off that many medical formulæ.

DISCUSSION.

DR. L. TURNBULL, in opening the discussion, said: In reference to these questions, my opinions are rather of the old-fashioned kind, and I believe in courses of instruction on cooking, which will be of much use to physicians. Dr. Benjamin Rush was accustomed in his lectures to remark that "a physician should spend six months in a kitchen before entering upon his practical career." He desired to heighten the importance of a knowledge of the effects of food, and also the correct way of preparing it. All these advantages could be combined with a course on pharmacy. Physicians should learn how to make beef tea, extract, etc., and similar articles. The important preparations of mush, of Indian and oat meal, for instance, are rarely properly made. They should be prepared over night, so as to be thoroughly gelatinized; if made in the morning just before being served they will not be digestible. In cases of very weak stomachs, many articles of diet may be peptonized with great benefit by using a small amount of a mixture of sodium carbonate and pancreatin, these being allowed to act for a short time at a temperature of about 80° F. Fairchild, of New York, prepares powders containing these peptonized materials in convenient amount. Such peptonized foods are like the old-fashioned preparations made with rennet and warm milk, and will be well borne by delicate stomachs. An article that is often wrongly prepared is barley. It may be softened and extracted with water, or it may be torrefied so as to make a sort of malt extract. In the latter form it is very suitable as a substitute for the diastase-like principle of the saliva in cases where

that secretion is deficient. It can easily be given mixed with other food, as in puddings, for instance.

This summer we have been very successful in relieving the irritability of the stomach and bowels of both children and adults, due to temporary indigestion, by substituting first barley-water alone, and after a time a wineglassful of barley-water, with half a tumbler of milk, or its equivalent of condensed milk.

Too little attention is given to character of water. It is sometimes very bad, containing either injurious mineral or vegetable matter. The Boston water supply was much injured lately by certain sponge forms.

Butter is an article of food which is often impure, and besides objectionable substitutes for it are often sold. The mixtures of animal fats known under the names of oleomargarine and butterine should not be used in the preparation of food.

Beef tea contains often but little nourishment, and in debilitated conditions, such as most cases of typhoid fever, beef essence made not from the round of beef, but from the neck, in which blood is found, will be much more nourishing. A valuable form of beef juice can be prepared by cutting up in pieces fresh beef, and placing it under a block of ice until, by the pressure, all the blood has been extracted. With the addition of a little salt it has been found to be retained by the most delicate stomach, and is very useful in cases of great exhaustion.

DR. ALBERT H. SMITH. The older we get the less disposed we are to rely on medicine and the more on diet. The remarks in the paper in reference to the importance of teaching physicians the art of cooking are deserving of full indorsement. On one point, however, I cannot agree with the author of the paper. He seemed to advocate the use of highly stimulating food in acute diseases; in other words, the methods advocated by Dr. Thomas King Chambers in his fascinating work—a work, however, which has done great injury. Dr. Chambers' idea was that all disease was due to depression, and therefore the remedy was to stimulate the system. This is an attractive theory, but is not true. In cases of disease attended with high temperature, we only add fuel to the flame by the use of stimulating food.

Nature has admirable powers of taking care of herself, even under a starvation regimen. The use of a low form of diet, with refrigerants and depressants, may often be of the greatest benefit. I can look back on my early experience, and recall cases in which, after operative measures, patients have been treated on the theory that plenty of pabulum should be furnished in the system, but such patients have perished. A strong patient will in such cases do much better on a low diet. Adhesive inflammation will be secured more satisfactorily on the low diet system.

DR. J. M. BARTON. I had under my charge during three years a patient who sustained life on about a pint of milk a day; never more than a quart a day. He was a physician who had his own views on questions of diet and therapeutics. Dr. A. H. Smith is right in his position as to the importance of low diet after operations, but in typhoid fever we have a very different indication. In the first case, that is after operations, food frequently acts as an irritant, but in the low fevers the patient is exhausted and needs support.

DR. FORBES. I am reminded of a compliment which I heard the younger Larrey pay to Orfila, the great French chemist. He said that he (Orfila) was the

greatest cook that ever lived. He said Orfila understood the disintegrating power of hot water. The effect of thorough boiling is most important, and since the days of Washington it has been an article of war that beans should be boiled for six hours. In the Crimea marked difference was seen between the French and English troops on account of the superior attainments of the French officers and surgeons in reference to many of the details of a soldier's life, and especially in cooking.

DR. SELTZER, in closing the discussion, said: I did not wish to include in the paper a discussion of the methods of preparing food, but merely to express the idea that it is important that doctors should know what to cook and how to cook. Many articles of food, that as ordinarily prepared are unfit for the sick, can be cooked so as to be palatable and digestible. Mrs. Rorer's method of cooking liver is an instance of this. She exhausts it with water to remove blood, then places it on ice until required, when it is cut into thin slices and toasted; sweetbreads are somewhat similarly prepared.

As to the use of stimulating food, we must judge Dr. Chambers' views by his own method. He draws the line between acute and chronic diseases, not making time the basis of the classification, but the tendency of the disease. Acute diseases tend to recovery, and these he leaves undisturbed; chronic diseases tend to fatal results, and in these he uses a highly nutritious diet, stimulating when a depressed state exists.

In reference to the suggestions made by different speakers as to the importance of systematic instruction of physicians in the art of cookery, I may say that such courses are now being organized. I do not think that such instruction can be advantageously given with pharmaceutical teaching. A woman's taste and tact are essential to the art.

Reports of Societies.

THE AMERICAN GYNECOLOGICAL SOCIETY.¹

THIRD DAY. MORNING SESSION.

A BUSINESS meeting was held at 8.30. DR. A. H. SMITH, Vice-President, in the chair.

The general session was opened at noon. The first paper read was one entitled

MENSTRUATION AFTER EXTIRPATION OF THE OVARIES,

by DR. HENRY F. CAMPBELL, of Augusta, Georgia. The influence of the ovaries in normal menstruation was not questioned, but the object of the communication was to suggest a possible explanation of those cases in which menstruation has persisted after their removal. Where a menstrual discharge has recurred regularly after the performance of double ovariectomy various explanations have been offered to account for this occurrence; it has been attributed to the habit of periodical plethora, to disease of the uterus, and recently it has been held to be due to the incomplete removal of the Fallopian tubes, which are claimed to be the real inciter of the menstrual nisis by Lawson Tait. Without denying or accepting any of these as

the sufficient explanation, the lecturer offered another which had not been hitherto noticed, or received proper attention. Taking into consideration the importance of the ovaries in normal menstruation, it might be anticipated that their removal would affect this function, and that it would be likely to cease, as it usually does. But it is known that conditions of the mammary gland exercise an influence over menstruation, and mental emotions also can affect it. If these remote causes may bring on or check menstruation in a healthy subject with active ovaries, it proves that there exists somewhere in the body behind the ovaries, inciter points to menstruation, a centre presiding over this function in the cerebro-spinal system, which may continue to produce periodical congestion of the uterine mucous membrane, and a sanguineous discharge after the ovaries themselves have been removed. If such inciter points exist it is possible that, for some reason, they may continue to act upon the uterus after ovulation has ceased.

The following case was cited: A young girl, some eight or ten years of age, was brought to him by her parents. They seemed very much alarmed by the fact that the child had menstruated twice, and sought an explanation. The patient was apparently a healthy child, had a good appetite except during her monthly periods, and at the time she came she had her third menstrual flow. It was a source of uneasiness and mortification to the parents, who feared precocious development. Upon investigating the case, however, there was nothing in her conduct or in her appearance to indicate premature development, but there was some enlargement and tenderness of the breasts; the pudendum was not examined. Inquiring carefully if there had been any recent illness, the parents said that she had never been sick but always healthy, and had never had anything but mumps in her life; closer questioning revealed that she had had an attack of mumps within three or four weeks. Having recently attended a case of mumps in a young man with metastasis to the testicle, he concluded that this was an analogous case, the metastatic irritation of the ovaries having excited them to premature activity and the phenomena of the menstrual nisis. He ascertained that the periods were irregular, the last interval being only twenty-one days, and that they were less marked than at first. He told the parents his view of the case, and almost promised them that it would be only a temporary condition. The results were as predicted, all the appearances of the menstrual nisis gradually subsided in the course of a few months, and finally disappeared, leaving the child as before; she returned to her normal condition. Some years later the menses appeared at the proper time, at about fifteen years of age, and the child changed and developed into a young woman.

This case might be cited as one proving that the ovaries are the cause of the menstrual nisis, and this he would not deny; but it also proves that an influence existing outside of these organs may excite their functional activity, as well as that of the uterus, so as to determine the appearance of menstruation.

In another child seen in 1867, the child had more decided evidences of puberty; there was enlargement of the breasts, development of the nipple, enlarging of pudendum; everything indicated a premature condition of puberty, and there had been three or four monthly flows. There was only one way in which this could be accounted for, and this was the existence of an acute

¹ Concluded from page 305

mammary abscess, which had been caused, according to the parents' statements, by the bites of the common "red bug," and subsequent scratching and rubbing to relieve the irritation. However this may be, she had the appearances of menstruation for several periods, after which the generative organs subsided to their normal state of development, and menstruation ceased with the healing of the abscess. This also shows that irritation at another point than the ovaries may cause menstruation; that the ovaries themselves are only one link in the chain of causation of menstruation.

Another case may be referred to in this connection. Dr. Clarke had reported it to the lecturer substantially as follows: Of two sisters in different stations of life, the poor one had a large family, the other had no children, although she was fond of them, and stayed with her sister after her confinements. She was irregular in menstruation, and suffered from amenorrhœa for a very long time. While staying with her sister she put the baby to her breast to quiet it, and in the course of a few days of this practice she found her menses returning, and on her return home she became pregnant, and was subsequently delivered of a living child. This is the statement of a gentleman of refinement and intelligence. There are cases on record in which milk has been made to flow from the breast by suckling a baby even after the menopause; he referred to a case of the kind in a grandmother who had to nurse her daughter's child.

Now do we not see in these various phenomena that there is some other influence at work, — perhaps partially, we do not say wholly, — something which is to be considered in menstruation besides the ovaries and Fallopian tubes? If menstruation can occur in a child with undeveloped ovaries, or in a woman with amenorrhœa, by remote irritation acting through some nerve centre in the spinal cord, it is possible that the same mechanism may act when the ovaries have been removed. Now the hypogastric plexus of nerves must have its innervation from some point in the spinal cord, and experience and observation point to the lumbar enlargement, or the crural bulb, as the precise place. This important nerve centre not only presides over the uterine functions, but receives and transmits impulses from the lower extremities. This portion of the spinal cord continues its activity after having its nervous connection separated. For instance, after amputation of the leg pains are often complained of in the foot or toes. A case was mentioned where repeated operations were performed to relieve a pain not located in the stump but referred to the big toe. The centre in the spinal cord had been long accustomed to receiving impressions from the part, and still continued to refer the irritation to that part, although the part had been removed and no longer remained in connection with the centre. This illustration is given merely to excite thought; the pains are not referred there simply as a habit, but because this is a special centre in the spinal cord which presides over the lower extremities, and may continue active after the leg has been amputated. May it not be true that there exists in the nervous system a special centre which presides over the function of menstruation, and which may continue its activity for a while after the ovaries are removed, just as in the case of the amputated legs or arms?

An objection to this may be raised, that castration nullifies sensuality. So it does when performed in a child, because it prevents the development of the sex-

ual system. It does not do so entirely in the adult. Ovariectomy is not performed in the undeveloped period. The organs and the nerve centres are fully developed, and have been functionally active for years; the lumbar centre has been responding to the irritation not merely of healthy ovaries, but to those organs in a diseased condition, and has thus, perhaps, become unduly sensitive. The fact to be accounted for is that for some reason or other menstruation occurs in certain cases after both ovaries have been removed. Admitting that under ordinary circumstances the ovary is the actual inciter to the nervous centre presiding over menstruation, this explanation of these cases of persistence of menstruation after double ovariectomy is submitted, that the nervous centre continues its activity, and continues to produce the periodical congestion and menstrual discharge from the uterus.

DR. GOODELL said that he was not prepared to admit that menstruation occurred frequently after double ovariectomy, nor to deny that this explanation might be possible where it does occur. As a rule double ovariectomy brings on the menopause. He had noticed that after the removal of both ovaries there is a pseudo-menstruation on the fourth or fifth day, which he always instructed the nurse to expect; it is probably due to the irritation of the ligature. As far as he could recall he had had only two cases in which menstruation had regularly appeared after double oophorectomy. In one there was also a fibroid tumor of the uterus. The patient, a young girl, had lost a great deal of blood, and was in a very prostrated condition. In the course of four or five months she had improved very much, and was able to go out of the house. Menstruation now returned. She applied for operation for the removal of the uterine tumor, but in attempting to enucleate it the structure lacerated, and it was found that it was a sarcoma. The operation was not completed. In another case both ovaries were removed, but menstruation had recurred regularly ever since. The only explanation that had occurred to him was that some of the ovarian stroma had been allowed to remain after operation, as suggested by Kœberle.

This incident recalled the reason why he had given up the vaginal for the abdominal operation in performing oophorectomy. Having in one case removed one ovary successfully, he was removing the other when it tore loose from the grasp of the volsella forceps, and part of it escaped into the abdomen so that he was unable to find it. Menstruation continued, and he afterwards performed the abdominal operation, and found that a small piece of the ovary, not larger than a bean, had been left, but it was sufficient to keep up menstruation. The case terminated fatally. In some cases of oophorectomy, owing to adhesions, it is difficult to place the ligature sufficiently low down to fully clear the ovarian structure. He believed that this fact might account for occurrence of menstruation in some cases.

In conclusion he suggested that the paper would have been more valuable if there had been some statistics of the frequency of the occurrence of menstruation after removal of the ovaries.

DR. EMMET mentioned a case of double ovariectomy in which he had also removed both Fallopian tubes, but menstruation returned, and the patient had menstruated regularly for the last thirteen months, the only difference noticed since the operation being that the periods did not last quite so long as before.

DR. GARRIGUES suggested the existence of a third ovary to account for the discharge, and mentioned a case of a young girl upon whom the operation was performed, and both ovaries were extirpated. She subsequently married, and had a living child. This could only be accounted for on the supposition that there was a third ovary.

DR. THOMAS said that no absolute conclusion had been reached by scientific men as to the cause of menstruation, or the influence of the ovaries upon it. The main point of Dr. Campbell's argument is that there is in some portion of the spinal cord, he thinks in the lumbar region, a centre which presides over this function. The speaker had no experience to report as to this supposition, which rests upon the opinion of the reader. With regard to the results of operation he could speak. He believed that he had removed both ovaries in about fifty or sixty cases. He had followed up these cases as well as he was able, and the impression upon his mind was this,—that where the ovaries are present menstruation is the rule, where the ovaries have been removed menstruation is the exception. It may persist for a time from habit. It is well known that some organs may retain their function after separation from the central nervous system. The heart of a sturgeon will beat for hours after removal from its body, owing to what has been called by Professor Draper "the registering action." In a similar way, in those cases in which menstruation continues after removal of the ovaries, he believes that it is because the uterus keeps up the habit of menstruation, and metrostaxis may occur, as in the case cited by Dr. Emmet. It is not regular as to quantity or time, but is a spurious menstruation. Most of these cases have followed Battey's operation, where the symptoms of menstruation may recur regularly for a year or two, and then the periods become irregular. He had also performed Tait's operation, but had found no difference between them in this respect. Battey's operation, consisting chiefly in the removal of the ovaries, Tait's consisting chiefly in the removal of the Fallopian tubes, and, secondarily, the ovaries, of the two the latter would be less likely to be followed by metrostaxis, because it makes a cleaner sweep. In some European journals cases have been reported in which pregnancy occurred after removal of both ovaries. This, of course, can only be explained by the presence of a third ovary.

About six months ago he had removed an ovarian tumor weighing forty pounds, and finding the other one diseased he proceeded to remove it. One of the assistants asserted that the second was parovarian, but on examination it was distinctly ovarian. Asking for the reason for his belief, the assistant pointed to a third and apparently healthy ovary lying behind the other. As it was normal he did not remove it. He could see no reason, if the Fallopian tube remained open, why such a case should not menstruate and have children. Increasing experience led him to believe that the old view is the correct one, that the ovaries are really the most important organs in menstruation. Of course the associated pelvic organs participate, but he does not believe that the Fallopian tubes have anything to do with inciting to menstruation. His rule is to remove the ovaries, but not the Fallopian tubes unless they are diseased, that is, he performed Battey's operation instead of Tait's, except where the tubes themselves are diseased.

DR. BYFORD said that in discussing this question very much depends upon what is regarded as menstruation. If ovulation is essential to menstruation, then true menstruation does not occur after the ovaries have been removed. Some ovarian stroma must be present before there can be menstruation, but if a mere bloody discharge is called menstruation, then it may frequently occur, but he would call this simply a form of metrorrhagia. He had not had much personal experience with this accident. He had performed double ovariectomy about seventeen times, and, with the exception of the metrostaxis coming on in three or four days after removal of the ovaries, he had not seen a single instance in which the bleeding recurred at regular monthly intervals. Where bleeding occurred it was from other circumstances, and there were no attendant symptoms such as accompany menstruation. Where these constitutional symptoms do recur regularly after the operation he believed that some of the ovarian stroma must have been left. It is sometimes very difficult to remove the ovary without tearing it when there are adhesions. He agreed with the last speaker that the old doctrine of menstruation had not yet been disproved, and the exceptions referred to will not invalidate the rule.

DR. MANN said that of the explanations offered, that there was some ovarian stroma, or there was some disease of the uterus, his experience was in favor of the latter. He had removed both ovaries in five cases, and had not seen regular menstrual discharge afterwards. In one from whom he removed the ovaries and fundus of the uterus, leaving only the cervix, the patient recovered, but subsequently returned because she had a flow. Upon examination malignant disease of the cervix was discovered. It is possible that some other cases of reported menstruation after removal of the ovaries may have a similar explanation.

DR. CAMPBELL, in reply, said that he had not presented statistics because he had not tried to prove the occurrence of menstruation after removal of the ovaries; this every one acknowledged. He had merely sought to give a rational explanation of this fact. He had not sought to determine whether ovulation occurred or not, as there were difficulties about deciding this question by microscopical examinations. In one case, where he witnessed the removal of the ovaries by Dr. Battey, he was positive that not a particle of the ovarian structure was allowed to remain, and yet menstruation persisted. With regard to the existence of a third ovary he was rather skeptical. He had examined bodies for forty years, and had never met with a case in which there was a third ovary, but he would admit that it might be the case, just as there may be supernumerary spleens or kidneys. It might be so in very rare instances.

The object of his communication was to account for the appearance of non-ovarian menstruation after the ovaries have been removed, and upon physiological principles. The separation of an organ from its nerve centre as a rule suspends its functions, and it may be that Lawson Tait's operation may be less likely to be followed by menstruation than ovariectomy because of the more complete separation of the nervous connection between the uterus and the spinal centre governing menstruation. It is not denied that the ovaries are the common inciters to menstruation, and ordinarily these organs act upon the lumbar centre so as to

excite its peculiar action, but exceptionally the irritation may reach this centre from a source independent of the ovaries. Ovulation causes menstruation, and the ovaries are commonly said to be the cause of menstruation. The truth of this proposition was not denied; he had simply endeavored to search a little deeper in order to find something behind the ovaries, a more recondite cause for menstruation, one that would explain its occurrence after the ovaries had been removed, or where they were not functionally active. Habit is no explanation, unless it means nervous influence. The beating of a sturgeon's heart is explained not by habit but by its ganglia contained in its wall. Where some ovarian stroma remains, it is a sufficient cause for the menstrual nixus; but eliminating these cases, there still remain some in which this can only be accounted for by nervous influence. The very fact that menstruation is periodical shows that it is governed by a cerebro-spinal centre. All functions under the control of the central nervous system are intermittent; waking is followed by sleeping, a period of activity by one of rest. The heart, the digestive organs, all follow the same rule. The periodical congestion of the uterus and Fallopian tubes is similarly controlled by the nerve centre, which may continue its activity after the ovaries have been removed.

AFTERNOON SESSION.

DR. WILLIAM H. BYFORD read a paper entitled

REMARKS ON CHRONIC ABSCESS OF THE PELVIS, in which he reported several cases, including one from the practice of Dr. Bixby. He attributed the cause of these collections generally to a pelvic hæmatocele, or to injury to the perimetrial connective tissue during delivery. In the course of time an extravasated clot of blood becomes softened by serous effusion, and the accumulation of white blood cells gradually becomes purulent, but may subsequently become largely absorbed. The contents may be ichorous, serous, or have the characteristics of ordinary pus. They are always inclosed by a cyst wall, lined with a pyogenic membrane, from which depend a number of teat-like processes or tags. These changes in the cyst are important from the point of view of the treatment. If the collection is a recent one these tags do not exist, and simple puncture or aspiration is sufficient to effect a cure. Where the collection points towards the rectum or bladder there is a tendency for these collections to fill again and again, and sometimes even a free opening into the vagina will not prevent their discharging into the bowel or bladder. When the pus has already made its way into these organs, but is imperfectly discharged, three different modes of treatment may be pursued in different cases: A probe may be introduced into the opening and pushed towards the vagina; when it projects so that it can be felt a counter-opening is made, and this should be made sufficiently large to admit two or three fingers. The object is to enable the operator to introduce his fingers so as to thoroughly explore the cavity, in order to remove all the tags and projections of the lining membrane; a free exit will be given to the discharge, and this will usually be sufficient; if not, a few injections of hot water will usually effect a cure. The second method is to introduce the aspirating needle in the vagina, and having drawn away the collection enlarge the opening to admit the fingers, as before. The third method is to find the

opening in the bladder or rectum and enlarge it, so as to make a free discharge through this outlet, and wash out the cavity daily with antiseptic solutions. The projections should be scraped with a dull curette or spoon, for if they are allowed to remain they are slowly separated and give a gangrenous odor to the discharges, and their removal will obviate their offensive character. There is no danger whatever in using a dull instrument for this purpose, guided by the finger. He gave the notes of a case of pelvic peritonitis and cellulitis, followed by abscess, in a woman who was supposed to have cancer from the fetid character of the discharges. A large abscess was discovered, evacuated, and daily washed with iodine solutions, and although she had been very much reduced she ultimately recovered.

In the early stages, before the cyst walls have undergone these fibroid changes, it is only necessary to evacuate the cyst by simple puncture; but when the lining membrane has undergone this change, simple evacuation is not enough, the walls must be scraped.

He summarized his communication as follows: He looked upon the inner surface of an abscess as similar in structure to an ulcer on the surface of the body, being covered with granulations which produce pus, as in external ulcers. These granulations are sometimes exuberant, sometimes flabby, sometimes large and fungated; they may give rise to healthy pus or unhealthy; in the course of time they may undergo changes and become converted into cicatricial tissue. Serum may be effused into the cyst by endosmosis, the cells become disintegrated, until the whole contents become serous, and may thus become absorbed, leaving a solid tumor of a cicatricial character, as was found in the case of Dr. Bixby, first mentioned.

DR. THOMAS thought that the reader had done considerable service in following out very closely the changes in the lining membrane of these chronic abscesses. There is a difference in practice with regard to seeking an outlet for these collections with the trocar or aspirator. In his opinion, no more dangerous practice existed in gynecology than that of seeking for these abscesses when they are located high up. If by conjoined manipulation an abscess is positively detected in the areolar connective tissue, then, and only then, may these explorations be made. He had used the aspirator, but only as a means of confirming his diagnosis, not as a method of treatment. The opening should be free. He was in the habit of introducing an exploring needle, and then running a narrow-bladed bistoury along its groove into the abscess. He had found a difficulty in keeping these wounds open, some requiring four or five operations, and had constructed a small glass tube with a flange to keep it from slipping in; a stitch or two through the flange and edges of the opening will keep it in place. By its aid he could have daily injections used, and was in the habit of applying a tampon of tow sprinkled with iodoform. There is one class of cases in which the whole floor of the pelvis becomes involved in a multilocular abscess; the tissues are hard, and the uterus immovable; the patient becomes much emaciated, and looks as if in the last stage of consumption. She is likely to become a confirmed opium-eater to relieve her suffering. It will be found usually that she has been confined to bed for five or six months, and is rapidly approaching her end. Upon examination the uterus is immovable, there is great resistance, and the whole roof of the pelvis seems

like a deal board. In such cases he had adopted the method of Dr. Tait in making an incision along the upper border of Poupart's ligament down to the pus, and evacuated it, using frequent injections. With regard to the curette, he had had no experience whatever in these cases.

DR. GOODELL thought that the suggestion of the curette was a good one; it was entirely novel. The cases he met with are usually chronic; the great majority are not seen *ab initio*, but first come under observation with fistulous openings on the abdomen, nates, or thighs. In a case where the opening is in front above Poupart's ligament, he recommended passing a uterine sound into it in order to make it project into the vagina, so as to make a counter-opening, he then would pass in a drainage tube, and inject frequently.

He uses permanganate of potash in preference to carbolic acid; he reported a case in which a five per cent. solution of carbolic acid had caused convulsions and black urine, showing the absorbing power of the walls of the abscess. In cases that are seen without openings, a different course may be pursued. He had once or twice used the aspirator, and did not think it so dangerous as had been stated; he thought it very valuable when the pus is high up. He had also performed Tait's operation, opening the abscess from above and introducing a tube. He had a case at present of this character, with great emaciation and prostration, and was in doubt about operating. He asked Dr. Thomas's opinion as to the propriety of operating.

DR. THOMAS said that he looked upon the operation as a desperate one, but the condition of the patient is even more desperate. He would not resort to abdominal section in the case mentioned unless it offered the only chance of recovery.

DR. SUTTON said that scraping of abscess walls is the practice in Esmarch's clinic at Kiel, followed by irrigation.

DR. CAMPBELL was not familiar with curetting abscesses, and had merely sought to keep them clean with the syringe and hot water. He afterwards distended the cavity with soft linen, in order to stimulate the walls to repair. He did not regard scraping off granulations as desirable in open ulcers; he regarded them as the natural means of filling up the cavity. He regarded constitutional treatment of the first importance, especially giving iron, and especially recommended the tartarized iron, or the double tartrate of iron and potassium; in these cases of chronic suppuration it favors the formation of healthy granulations. Ricord believed that the recommendation to use this salt in phagedæna was equally valuable as the introduction of the iodide of potassium for secondary and tertiary syphilis. He, in conclusion, referred to a case of a large pelvic abscess from which gallons of pus escaped, which had opened on the thigh. Under daily injections of very dilute Labarraques solution and the internal use of iron the patient greatly improved. He was not disposed to favor the treatment of abscess by the curette.

DR. BYFORD said that he had not attempted anything like a complete treatise upon pelvic abscess, but simply called attention to some forms of it and their treatment. The danger of exciting inflammation by the curette applies only to recent or acute abscess. He had read a paper upon this subject before the American Medical Association at Cleveland.

In cases where there were several openings he had

carried out the treatment with the drainage tube with great success. He did not claim originality for the curette; he had used it mainly to remove those tag-like projections mentioned.

DR. GEORGE J. ENGELMANN, of St. Louis, read a paper on

ERGOT, THE USE AND ABUSE OF THIS DANGEROUS DRUG.

Apologizing for calling up such a trite subject for discussion, he said that the poisonous properties of ergot, though well known to this Society, were not generally appreciated by the profession. He believed that its use should be very much restricted, as it is generally used when it is injurious, and where it may be safely used there are much better means at hand with which to control hæmorrhage. It is never necessary, and can never be relied upon with certainty. The only condition in which it may be useful is post-partum hæmorrhage, but here it is too slow in its operation; there are better methods of controlling the hæmorrhage. Ergot should never be given to expel the contents of the uterus; it produces tonic tetanic contraction, and favors hæmorrhage when its action is past. He would like to see ergot restricted to the non-pregnant condition; there are no conditions in which it is necessary. In the first and second stages of labor its use is generally condemned; in the third stage it is apt to act violently, and produce firm contraction with incarceration of the placenta. If given at all it should not be used until the uterus has been emptied, but cannot be recommended unless given with great care. Massage and pressure with the hand over the uterus will be more prompt and reliable. Given during labor it is liable to produce lacerations of the cervix, vagina, or perineum, or hour-glass contraction and death of the child. The injury which the ergot does is not likely to be discovered at the time, but is found out afterwards, and its cause is unsuspected. The drug is in common use by the general profession for all uterine disorders, and it does a great amount of mischief in incompetent or unskillful hands.

DR. JOHNSON did not think it was employed so recklessly as the lecturer had stated. He did not know of any intelligent physician who would give ergot in the first stage of labor. Having read a paper upon this same subject last winter, Dr. Fordyce Barker had called attention to a class of cases where ergot might be useful. In cases where chloroform has been given it may be administered in the third stage of labor to obviate any tendency to relaxation caused by the chloroform.

DR. CAMPBELL said that he never gave ergot until he was sure that the os was fully dilated, and that no obstruction existed. He always carried ergot with him in his obstetric bag.

In 1836 or 1837 Dr. Milton Antony, in a Charleston journal, wrote some stringent articles upon this same subject, giving the action of the drug, and insisting that it should never be given until the os was fully dilated, and usually not before the birth of the child. He regarded it as a remedy of great power, and even as taking the place of the forceps. Now the forceps are used in many cases in which ergot was formerly given. He never gave it to promote expulsion of the head, but to produce contraction of the uterus. He would not give it during post-partum hæmorrhage, but would give it to *prevent* post-partum hæmorrhage.

DR. A. H. SMITH indorsed the statements of the paper, and condemned the use of ergot as always calculated to do harm, and often does harm. He denied that chloroform, when properly given during the labor, is likely to be followed by relaxation of the uterus. Ether, on the contrary, often is, because much more of it has to be given to produce *anæsthesia*.

DR. CAMPBELL said that he never had given ether in his life in parturition, but always uses chloroform. He believed, however, that chloroform is followed by relaxation of the uterus.

DR. ELWOOD WILSON said that he had used chloroform for years, but had been obliged to give it up finally on account of its relaxing effect and frequent post-partum hæmorrhage after its use. He had seen the same result from the long-continued administration of ether.

He was surprised to hear the remark that ergot should be abolished. He would question the practice of any man who approached a case of placenta prævia without ergot. He had had thirty-two cases of placenta prævia in which he had used it, and had given it to produce the tonic contraction which has been claimed for it. He was also surprised to hear that it is of no use in post-partum hæmorrhage. He regarded it as of immense value in post-partum hæmorrhage. The difficulty generally is that ergot is given too late, and in too large quantities. He asked if, in the experience of those gentlemen who had used it, they had not noticed that after giving ergot the patient had complained of a flush and heat, and at the same time the uterus contracts, and the bleeding stops. He regarded this action of ergot a very important one. He thought that half a teaspoonful of the fluid extract would produce its effect in about ten minutes, and after expelling the placenta the uterus would go into firm contraction. In his opinion it is bad practice to throw carbolized water into a recently delivered uterus. As regards the use of ergot after abortion, he had been in the habit of giving it all his lifetime, and had never experienced any great difficulty in the treatment except in one case, which he tamponed, unfortunately, and the woman died in thirty-six hours, of peritonitis.

DR. ENGELMANN feared that he had been misunderstood, as he had not read his paper in full. He meant to bring out in the discussion the possible limitations of the scientific use of ergot, and to direct attention to its general abuse. He did not deny that it could be of service in skillful hands, but, being a powerful poison, it should never be administered by unskillful persons. He spoke of its use among the public by nurses, midwives, and others as being exceedingly dangerous, it being popularly regarded as the great remedy for delayed labor, and patients frequently ask for it if the labor is slow. He had seen cases of arm presentation with the uterus in a state of firm, ergotic contraction, where nothing could be done except to mutilate the child. He believed that the only proper sphere for ergot was when the uterus is empty. He condemned its administration for expelling the contents of the uterus.

After the passage of some complimentary resolutions to Dr. Chadwick, the founder of the Society, for his faithful service for seven years as its secretary, and to Dr. Mundé for his service as treasurer, the newly-elected officers were installed, and the Society adjourned.

OFFICERS FOR 1883-84.

Dr. Albert H. Smith, of Philadelphia, President; Dr. James R. Chadwick, of Boston, first Vice-President; Dr. Samuel C. Busey, of Washington, D. C., second Vice-President; Dr. Frank P. Foster, of New York, Secretary; Dr. Matthew D. Mann, of Buffalo, treasurer.

Next place of meeting, Chicago. Time, the third Tuesday in September, 1884.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

JUNE 18, 1883. DR. W. L. RICHARDSON presided.

RICKETS AND CONGENITAL SYPHILIS.

DR. POST exhibited a dog which showed characteristic deformities of rickets, and read a short communication on the Supposed Relationship between Rickets and Congenital Syphilis, in brief as follows;—

Several communications have recently been read before the Surgical Society of Paris on the subject. Parrot, in his paper, gave in detail his well-known ideas in brief as follows: Rickets is the final lesion of the syphilitic germ which has already passed through intermediate steps, and this relationship is established by the study of a great number of patients in the various stages of the disease. He dwelt somewhat upon the traces left on the skin and teeth after the active stage of the disease has passed, and then proceeded to the second part of his paper, which dealt with the bony lesions, and to which alone I wish to refer to-night. These osseous lesions he ranges under three principal types, which correspond to three successive stages of the disease and ages of infancy: first, the stage of osteophytes; second, the stage of gelatiniform softening; third, the stage of spongoid tissue.

The first stage shows itself in the fœtus, and for the first two months after birth. It is characterized by the development about the diaphysis of osteophytes with bony fibres perpendicular to the diaphysis, and the bones where it ought to be sought are the tibia on its internal face, and the humerus at its lower end and posterior aspect.

The second stage, that of gelatiniform softening, shows itself during the first year, and is characterized by the appearance in certain parts of the spongy tissue, and even of the shaft, of a soft, watery, transparent tissue, analogous to jelly, which can end in the cranium by the perforation of the tables and diploë, and at the extremity of the long bones ends in a separation of the epiphyses, and consequent loss of power, to which condition Parrot has given the name of syphilitic pseudo-paralysis.

To the third stage appertains the medullization or decalcification of the bone, which is a continuation of the preceding stage, and differs in nothing from rickets. The child does not necessarily go through all these stages of bony disease, but may skip the first two, presenting only the rachitic stage, exactly as certain stages of acquired syphilis may be omitted.

Such is the shortest possible statement of Professor Parrot's views. He has long held the same ideas, and read a paper embodying them at the London Medical

Congress. They are by no means generally accepted. At the meeting of the Surgical Society of Paris at which Professor Parrot read his paper dissent was expressed, and at a subsequent meeting a paper was presented by Dr. Cazin, of the Berck Hospital for Scrofula, giving a detailed examination of forty-nine rachitic children in the hospital in whom it was impossible to find any sign of syphilis.

Although, as I have said, the identity of these two diseases is not accepted, the authority of Professor Parrot is so great that they deserve serious consideration. If the subject was of sufficient importance to occupy the time of the London Medical Congress, and to fill many pages of their Transactions, a few moments devoted to it here may not be ill employed. My object is to show that rickets occurs in the dumb animals, among whom it is well known syphilis does not occur.

The attempts to inoculate syphilis upon the inferior creation have been continued through a long series of years, and their negative result is tabulated in the ordinary text-books on venereal diseases. The subject recently occupied the attention of Neumann, of Vienna, who has performed a number of experiments which confirm the negative results of previous experimenters. These experiments of Professor Neumann have extended over a year, and number fifty-four inoculations upon a great variety of animals, among which were three apes, which, as a near approach to man, ought to be most eligible subjects for inoculation. These inoculations were made directly from human patients, and most of the subjects of the experiments were kept under observation for a long period. Neumann considered himself justified in concluding that syphilis is exclusively a disease of the human organization.

Auspi, in commenting upon Neumann's paper, considered that the subject must be left undecided. He believed Neumann's mode of inoculation faulty, but his own experiments by the method he preferred had the same negative result.

Professor Müller gave some exceedingly interesting details of the diseases of animals which most resemble syphilis. Dogs have frequently in the mouth, on the prepuce, and penis growths which resemble venereal warts. These are not transferable by experimental inoculation, though apparently transferable naturally. Hares have an affection which resembles syphilis, but which is of a tuberculous nature. Pigeons show infiltrations on the wings, feet, and head, which are apparently syphilitic, but are really tuberculous. Horses have a so-called chancre, the syphilitic nature of which is doubtful, but which is contagious.

Herr Docent Dr. Mracek spoke of the inoculations of Hänsell, who injected the anterior chamber of the eye of rabbits, and tumors resembling syphilitic gummata resulted. These he considered proof of inoculation of syphilis.

Kaposi practically summed up the matter by saying that the so-called positive results could not be considered conclusive until it is possible to convince one's self of the undoubted specific character of the results of inoculation. He had found results similar to Hänsell's in the eye when non-syphilitic inoculation material was used.

Professor Stricker added that he had examined one of the eyes inoculated by Hänsell, and found undoubted tuberculosis.

These men, then, who occupy positions of authority on the subject, reaffirm the previous judgment that

the syphilis of man does not exist in animals; or rather, more logically, that the alleged positive proofs are unreliable, and that up to the present time all proof goes to the establishment of the negation. If the existence of rickets in domestic animals is proved, the proof of the non-identity of congenital syphilis and rickets is as strong as the negative proof in regard to the existence of syphilis in animals; and to show the existence of rickets in domestic animals I exhibit a dog with characteristic deformity.

This dog comes of a family that has long been under observation. I have known three generations. Though never winners of prizes, they have been carefully bred, and have been a healthy and active race, and great favorites with their owners for intelligence and hunting qualities. Certainly none of the immediate relatives of this dog have any disease that resembles syphilis in the human subject; of the mother of the specimen in question I can say that with certainty. The litter to which the dog belonged were fed to a large extent on farinaceous food, and kept for several hours each day and slept at night in a dark and damp cellar. They were all attacked when about two months old with diarrhoea, and their legs soon began to grow crooked. One of them took up his position behind the kitchen stove, and resented the slightest handling, even crying, evidently from pain, when brushed accidentally by his mistress' dress.

When I saw them I found, in addition to a marked curvature of the fore legs, an enlargement of the epiphyses at the wrist, and tenderness on pressure over them. The ends of the ribs were also enlarged, showing the rachitic rosary in a manner which in the human subject belongs to rickets, and nothing else.

The dogs were immediately removed to a place where they had at all times access to the open air, and were fed on animal food. The diarrhoea soon vanished, the deformity ceased to increase, and diminished in various degrees in the different individuals, until in some members of the litter all trace of deformity has practically vanished.

Such a deformity as the dog presents might be attributed, perhaps, to some other disease of bone, — in fact, those who believe in the identity of congenital syphilis must believe the disease to be something beside rickets, — but the history is too striking to be lightly passed over. The ordinary causes of, or at least the ordinary circumstances which precede, rickets — improper food and unhealthy dwelling — were present. The earliest symptoms of rickets are diarrhoea, unusual perspiration, especially about the head and neck, and tenderness, often so extreme as to be manifested on the slightest handling. On removal to better circumstances, or with simply a better diet, recovery takes place, the deformity ceases to increase, the size of the epiphyses diminishes, and the deformity already acquired remains stationary, or improves somewhat. With the exception of the perspiration, which could not manifest itself in the dog, the history, taking the whole litter, was most striking in its resemblance to the ordinary course of the disease in the human child; the only difference lies in the fact that the deformity in these puppies took place in the fore legs, while its most common seat in the human race is in the tibiae. Rachitic arms are common enough in children, but they are seldom the earliest seat of the deformity.

The answer to such facts on the part of the believer in the identity of the diseases must be either that

this dog's parents had syphilis, or his disease is not rickets. The first hypothesis is opposed by all the known facts on the subject. If the second answer is made, and it is the answer given to the artificially developed rickets, it seems equally fair to say that the children with similar symptoms and deformities are not the victims of rickets, but of a disease which should receive some other name.

My argument is simply this: A disease occurs in young dogs which presents all the characteristics, general and bony, of rickets in the human subject, and which, so far as can be argued from history and gross appearances, is identical with human rickets. Syphilis does not occur in dogs; therefore rickets cannot be identical with congenital syphilis.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

The first meeting of the Society after the summer recess was held at the College of Physicians and Surgeons, New York, on the evening of September 24th, when a paper on Adenoid Vegetations of the Pharyngeal Vault and their Relation to Middle-Ear Disease was read by Dr. R. E. Swinburne.

NOMINATION OF OFFICERS. "OLD CODE" AND "NEW CODE" TICKETS.

The nominations of officers for the ensuing year, to be voted on at the annual meeting on the fourth Monday in October, were also made, and two opposing tickets, the one "old code" and the other "new code," were put in the field. The "old code" ticket is as follows: President, Dr. T. Gaillard Thomas; Vice-President, Dr. Charles A. Leale; Secretary, Dr. A. E. Judson; Assistant Secretary, Dr. P. Brynberg Porter; Treasurer, Dr. Henry D. Nicoll; Censors, Drs. Charles McBurney, Charles S. Wood, Richard H. Derby, Charles Hitchcock, and T. Herring Burchard. The "new code" ticket is as follows: President, Dr. S. Oakley Vanderpoel; Vice-President, Dr. Andrew H. Smith; Secretary, Dr. Wesley M. Carpenter; Assistant Secretary, Dr. C. H. Avery; Treasurer, Dr. O. B. Douglas; Censors, Drs. Frederic R. Sturgis, David Webster, Daniel Lewis, F. R. S. Drake, and Joseph W. Howe. The latter nominations were offered by Dr. Sturgis, and the former by Dr. Austin Flint, Sr., who, in proposing the ticket, remarked that he did so at the request of a large number of medical men who are in favor of sustaining the Code of Ethics of the American Medical Association. The gentlemen whose names were on it, he said, were uncompromising adherents of that Code, and their election would mean that the County Society did not approve of the action of the State Society. In conclusion, he requested all friends of the old Code to refrain from making any other nominations, so that their strength might be concentrated on the one ticket. The election is looked forward to with great interest, and the vote will no doubt be the largest ever polled in the Society.

— Recently, at Athlone, Ireland, a man was fined ten shillings for allowing a "wake" to be held upon his child, who had died from scarlet fever.

THE TRI-STATE MEDICAL SOCIETY.

THIS Society held its ninth annual meeting in English's Hall, Indianapolis, on September 18th, 19th, and 20th. The attendance was larger than at any previous meeting, numbering about two hundred and fifty, and the papers presented were of more than usual excellence and interest, so that the Society may be considered to be in a flourishing condition.

CHANGE OF NAME AND TERRITORY.

It was decided, as suggested by the President, Dr. Wm. Porter, of St. Louis, to change the name of the Society and enlarge its territory, which has hitherto been confined to the States of Illinois, Indiana, and Kentucky, and the cities of Cincinnati and St. Louis.

After some discussion the Society was rechristened, and hereafter will be known as the "Medical Society of the Mississippi Valley." The next meeting will be held in Springfield, Ill., in September, 1884, and Dr. B. M. Griffith, of that place, was elected President for the ensuing year.

The programme included over fifty regular papers, and although most of them deserve special mention space forbids, and I shall only speak of those which were of exceptional interest to the Society.

Dr. A. Morgan Vance, of Louisville, in a paper on

THE TREATMENT OF COMPOUND FRACTURES,

said that he was astonished at the diametrically opposing opinions held by different surgical authorities as to what is the best thing to be done in these cases, some advising to treat them all as open wounds, others to close them and endeavor to reduce them to simple fracture. Dr. Vance gave his method, which was to treat them as simple fractures and put them up in fixed splints, as plaster of Paris, and trust to the thermometer to tell when pus had formed, and it became necessary to open the dressing. He used no antiseptic dressing, expecting some hemorrhage to occur when reaction took place, and the blood to seal and protect the wound. He uses oakum or some other absorbent about the wound.

If the temperature rises to 101.5° F. to 102.5° F. without apparent cause an investigation of the wound is demanded. If this rise should occur during the first forty-eight hours, he gives a mercurial and quinia, and leaves the wound alone. If it occur suddenly on the third and up to the sixth day, he removes the dressing, and allows free drainage.

Dr. Wright, of Olney, Ill., advocated nerve stretching in sciatica, giving cases.

Dr. J. E. Link, of Terre Haute, presented a very interesting paper on

THE USE OF THE ROLLER BANDAGE,

advocating its employment to repress abscesses and erysipelas, and as a dressing for stumps after amputation. He uses successive layers of old sheeting wrapped around the limb so as to put the muscles at perfect rest, and leaving the wound open. The author claims for this method absence of all after-pain, freedom from suppuration and pyæmia, and more rapid healing of the wound. Dr. Link claims never to have lost a case of amputation out of two hundred cases. If his method will do what he declares it will it should be carefully and extensively tested.

DR. H. H. MUDD, of St. Louis, read a paper on

STONE IN THE BLADDER,

comparing the operations of lithotomy and lithotripsy, giving the preference, under certain restrictions, to the latter, and citing cases.

DR. DUDLEY S. REYNOLDS, of Louisville, advanced a new method of treating

OPACITIES OF THE CORNEA

by pricking the part with a tattooing needle, when, by the active vascular inflammation set up, he finds that the opacity is diminished in intensity, and in many cases a fair degree of vision has been restored.

In the discussion on this paper Dr. Post, of St. Louis, stated that Dr. Snellen had used the same method in his practice with good results.

CHLOROFORM IN LABOR,

by DR. G. V. WOOLEN, of Indianapolis, created considerable discussion, the author holding that the anæsthetic should be used freely even to profound insensibility. The general opinion seemed to be that this position was untenable, and that the drug should only be used in moderation, as the full anæsthetic effect exposed the patient to added risk of post-partum hæmorrhage, etc.

DR. S. J. JONES, of Chicago, read a paper on the Influence of Errors of Refraction and Defects of Accommodation of the Eye, which was well received, and also by title a Plea for Early and More Thorough Treatment of the Ear, after which the most successful and last meeting of the Tri-State Medical Society adjourned.

Recent Literature.

On the Pathology of Bronchitis, Catarrhal Pneumonia, Tubercle, and Allied Lesions of the Human Lung. By D. J. HAMILTON, M. B., etc., Professor of Pathological Anatomy, University of Aberdeen. London: Macmillan & Co. 1883. 248 pages.

In this series of studies, originally published in the *Practitioner* in 1879 and 1880, the author has given a description of the appearances observed in the diseases mentioned in the title, based chiefly upon their histological character.

The first half of the book, which treats of the relations of acute and chronic inflammations of the air passages, is especially valuable, since it is only by a close study of the early and insignificant alterations that the later and more marked ones can be interpreted. A well-simplified but careful description of the novel structure of the bronchi is taken as a starting point, great stress being laid upon the manner in which the ciliated columnar epithelium is produced from the more flattened, deeper layers, and upon the existence of a structureless basement membrane supporting these and entirely separating them from the surrounding muscular and fibrous coats.

The changes which occur in acute bronchitis are next described. An acute congestion, such as is found after death by opium poisoning, is probably the commencing stage. This is characterized by a slight desquamation of the epithelium, with great œdema of the basement membrane, and an accumulation of round cells in the fibrous layer of the mucosa. As the dis-

ease progresses these processes become more marked. Hæmorrhage into the inner fibrous layer and basement membrane is associated with the extreme congestion, and the capillaries of the nerve ganglia and trunks are distended with blood.

In the formation of the secretion the cellular parts are considered to be chiefly derived from the proliferating epithelial cells, which are cast off in an immature state, any passage of the accumulated leucocytes and endothelial cells from beneath being prevented by the thickened basement membrane. The watery and purely mucous parts of the secretion are supplied by the glands.

Chronic bronchitis presents itself under different aspects, according as it results from (1) an acute bronchitis, (2) valvular lesion of the heart, (3) inhalation of foreign materials, or (4) chronic interstitial nephritis.

In the first case, the cellular infiltration persists, and an atrophy of the muscular coat is caused by the pressure. The basement membrane still remains intact, however, and forms a sharp line between the germinating epithelial layer and the masses of small round cells below. The cartilage also begins to disappear, being encroached upon from without, its own cells shriveling up and taking no part in the process. The walls of the small arteries are thickened, and the capillaries dilated to small sinuses. The mucous glands are partially destroyed.

When it follows disease of the valves of the heart the inner surface of the bronchi is smooth, and is formed by the basement membrane denuded of everything but a few bud-like projections of germinating epithelium. The membrane itself is thickened and œdematous, and œdema of the fibrous layers replaces the small cell infiltration of the first form.

Where the bronchitis has arisen from the presence of particles of stone or coal which have been carried into the lungs with the breath, the author considers that these have not acted as direct irritants to the larger air passages, but have first found their way into the peribronchial tissue through the alveoli and smallest bronchioles, and then exerted their influence; the basement membrane in this case preventing either the ingress or egress of such minute fragments, since the sputa from these cases is white or yellow, while the lung on section presents a coal-black color. The accumulation of pigment in the lymph spaces and about the blood-vessels destroys the nutrition, and thus gives rise to the irritation which produces catarrh.

After nephritis the appearances are similar to those observed in the first case.

As complications of chronic bronchitis are considered interstitial pneumonia, emphysema, collapse of the lung, and bronchiectasis. The production of some of the forms of the last three can certainly be most readily explained by the mechanical effects of mucous plugs and the forced expiration of coughing, combined with the changed structure of the bronchial walls. Whether, however, the formation of connective tissue follows directly from the accumulated cells, as the author assumes, is not quite so clear, especially since he signals with this the co-existence of tubercle, the relation of which to chronic inflammatory processes being still undecided.

The second part of the book is devoted to the catarrhal processes which take place in the alveoli of the lungs. Considerable space is used in showing that

blood pressure suddenly applied can produce croupous pneumonia without the intervention of any "inflammatory action." The illustrations of the catarrhal pneumonias are very good, and the whole subject is well presented, although not differing essentially from that of the classical writers on the subject. In an appendix he is inclined to think that the bacillus of Koch is of the value of a secondary cause.

The book is well worth the perusal of those who are especially interested in the subject, the illustrations being new and valuable.

Medical and Surgical Journal.

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THE PHYSIOLOGY OF THERMAL SENSATIONS.

On the ground of investigations in the Harvard physiological laboratory, Drs. Lombard and Walton have advanced a new theory on the physiology of thermal sensations, the main features of which have been published in the *Centralblatt für die Med. Wissenschaften*, 1883, No. 32.

All efforts on the part of physiologists to find special nerve terminations to receive and special nerve fibres to transmit sensations of heat and cold having failed, these authors explain thermal sensation as a variety of pressure sensation, and suppose both varieties of sensation to be received and transmitted by the same nervous apparatus, the brain being credited with the distinguishing power. Their experiments show that while connective tissue and albumen contract under cold, and expand under heat, elastic tissue and the skin as a whole contract under heat like caoutchouc. The nerve terminations, then, are subject to constant changes of pressure resulting from changes of temperature, and being subject to such changes the sensation must be conveyed to the brain. It is probable, therefore, that it is these changes of pressure which we feel, and which we learn to interpret as sensations of heat and cold by associating ideas in the brain.

An interesting feature of the experiments is that the epidermis is found to be influenced hardly at all by heat and cold, and that the underlying skin when subjected to extreme heat (over 63° C.) contracts in a marked degree, and remains contracted after the heat is removed, leaving the epidermis separated in the form of a blister. This leads the authors to explain ordinary blisters, at least in part, in a similar manner.

The similarity of the sensations received from rapid division of the skin with a sharp knife, and stroking

the skin rapidly with a very hot wire, supports this theory, or, if one prefers, is explained by it, as is the similarity of the impression from a light breeze upon the surface of the body and brushing it lightly with cotton wool.

The practical economists may take a hint from this suggestion of cold abstract science, which, if supported, may extend the domain of the correlation of forces. The possibilities of pressure may, in practical American hands, be developed in time to relieve humanity of some of the embarrassments arising from destroyed forests, exhausted coal fields, and increasing cost of fuel.

It is probably not merely a spasmodic reflex action, nor yet a mere impulse to antagonize by action exaggerated cardiac activity, which leads the lover to press the hand of the beloved. If the present theory is verified we shall suspect that a fine intuition had long ago divined the correlation of pressure and warmth, and that as elastic tissue and the skin in general contract under heat like caoutchouc, pressure is quickly converted into warmth.

The theory advanced by our physiologists is ingenious, plausible, and pleasing to contemplate, and we have merely endeavored to adapt it to the tastes of the purely practical among the profession.

THE TYRANNY OF OFFENSIVE TRADES.

THE pollution of the outer air, that most important article of consumption, in and around all our large cities by noisome trades and manufactories is a growing evil, and one not always easy to deal with successfully. The inherent difficulties are increased by the extreme good nature, as a rule, of the American citizen in these matters, and from his inertia or carelessness about protecting himself from such violations of his primitive rights. An extreme theoretical right to think, and speak, and act as he pleases, apparently results in an extreme reluctance to protest against being imposed upon or robbed by others who are practically emphasizing this theoretical right. Even when protests which cannot be neglected are made, and laws are provided, it is not always convenient for those charged with their execution to enforce them against a dispenser of votes as well as of smells. The upright executor of the law, too, is confronted with the distinction between the injury to health and the simple injury to the æsthetic sense, and with the risk of merely driving an offensive trade from a place where it is a nuisance to one where it becomes a still greater one. The offense of many trades can be greatly mitigated by proper precautions, which often, it is true, increase somewhat the cost of the product and diminish correspondingly the profit of the manufacturer, but here the political-economical intelligence of the citizen must counterbalance his inertia in complaining or his approval of commercial activity, and make him bear in mind that if pure air becomes dear in a direct ratio as manure and soap become cheap, these last may after all cost too much.

Nowhere has the public comfort or the public health been more greatly or more persistently outraged by offensive trades than in the city of New York and its neighborhood. Hence we are very glad to see that five of the manufacturing establishments on Newtown Creek, Long Island, which were recently inspected by the officers of the State Board of Health, and were ordered by the Governor to so modify the processes they employed as to cease to be public nuisances or else discontinue their business, having failed to do so within the required time, were on the 24th of September visited by Under Sheriff Warnoch, with a number of deputies, and compelled to close up permanently. The raids on these stench factories will convince their proprietors, and those of similar places, who have been insolently defying Governor Cleveland's orders, that he is really in earnest in the matter, and that they will at last have to pay some respect to the health and comfort of their fellow citizens. It has been well remarked lately in regard to these very factories, that "the patience of the American people has been illustrated in a striking manner by the way in which rich and poor alike on Manhattan Island and in adjacent cities have for years endured the nauseating odors that have tainted the air for miles around the oil refineries, fertilizer factories, and other sources of vile smells that are to be found in the vicinity of Newtown Creek."

The energetic action of the Board of Health and of the Governor of New York, will, we are persuaded, not be without its good influences beyond the borders of that State.

COPPER AS A PROPHYLACTIC AGAINST CHOLERA, TYPHOID FEVER, ETC., ETC.

FIFTY years ago, during the epidemic of cholera of 1832, a Dr. Méray in Paris recommended and used copper largely as a prophylactic against that disease. The suggestion does not seem to have commended itself very strongly at the time, for it was reserved for Monsieur Burf, of metallo-therapeutic fame, to rescue it recently, and, we believe, briefly, from almost complete oblivion. M. Burf informed the French Academy of Medicine, at its meeting of the 14th of August last, that for more than thirty years he has been devoting himself to a constant study of the efficiency of copper against cholera and other diseases, and the Egyptian epidemic this summer unsealed his lips as to the result of these studies. They lead him to formulate the announcement that persons whose occupation, whose contact with or mere neighborhood to cupric industries cause them to be exposed daily to an impregnation with copper, enjoy generally an immunity against cholera proportioned to their impregnation at the time of the epidemic, and that the exceptions—for such M. Burf acknowledges exist—are about as rare as those among persons properly vaccinated who are attacked with small-pox.

M. Burf's researches lead him to recommend during an epidemic of cholera, the wearing of a copper

belt; the combustion in alcohol lamps in houses of the bi-chloride of copper; the daily exhibition of copper by the mouth or rectum in progressive doses; the use of mineral water containing copper salts, and of vegetables treated with sulphate of copper, for such can be found in France.

At a subsequent meeting of the Academy a M. Bailly who practices medicine at Chambly, where extensive copper works are situated, made some statements which by no means stimulate confidence in the value of M. Burf's thirty years of research or the conclusions which he draws from them. M. Bailly, among other things, stated that Chambly in 1832 was ravaged by cholera, there being eighty-seven deaths out of a population of 1,400, and again during the epidemic of 1849, there were forty-seven deaths, whilst at a neighboring village where there was no copper factory there was no cholera. During an epidemic of typhoid fever M. Bailly himself attended fifty-six cases, twenty-six of whom were workers in copper, and of these four died.

M. Burf in response to M. Bailly, thinks his objections of little force, for, he says, that the metal *altenide* employed in the factory at Chambly is white metal containing only a very minute proportion of copper; moreover he says the town itself is traversed by a stream into which all the waste of the factory is discharged, and under the circumstances the presence of typhoid fever and choleraic diarrhoea is not, he thinks, surprising.

The French Academy of Medicine is not without its "silly season."

THE NEW YORK ACADEMY OF MEDICINE AND THE CODE.

WE have received a circular from Dr. Fordyce Barker, which deprecates the introduction of medical politics into the New York Academy of Medicine, and aims at restoring the fraternal harmony of that learned body, so unfortunately interrupted by the wretched Code controversy in which the profession in New York has been snarled up. Our warm sympathies are with Dr. Barker, as his reference to a previous editorial in this JOURNAL shows, and we hope his will not prove a thankless task.

MEDICAL NOTES.

—A newsman on the Long Island Railroad recently hit upon a novel expedient for dispensing with the services of a dentist. Having an aching tooth which he wished to get rid of, he tied one end of a piece of strong twine around it, and secured the other to the rear end of an express train which was about to leave the Hunter's Point depot. When the cars started he ran along the platform for a short distance, and then dropped suddenly on his knees, while the train went on with the gory tooth dangling in its wake.

—"O monstrous! but one half pennyworth of physic to this intolerable deal of sack!" seems to have been the sentiment of the Commissioner of Internal Revenue on receiving the report of the analysis of

Hostetter's bitters, which was that it is made from a strong alcoholic liquor flavored with various essential oils, as oil of anise, coriander, etc., and contains some vegetable bitters, such as gentian, cinchona, etc. It will be seen that the bitters contain at least sixty-five per cent. of proof spirits, which will be equal to about eighty-two per cent. of ordinary whiskey at eighty per cent. proof, obviously much more spirits than is absolutely necessary to hold the other ingredients in solution. His first impression was as follows: "Containing, as it does, no deleterious drugs and only four per cent. of anything like a drug, I should probably be entirely justified in deciding outright that one who sells it for any purpose is a retail liquor dealer within the meaning of clause four of Section 3244, Revised Statutes, etc." But after longer reflection he naively concludes, and so announces his decision, that if the vendor of this compound sells it *as a medicine* and not as a tippie, and if the purchaser also buys it in the same virtuous spirit, it is not a liquor, and no license is required for its sale. But if either party considers it a drink it is no longer a medicine. Who shall say hereafter that there is nothing in a name?

—The British consul at Bordeaux, in his last report, states: "Low-priced genuine Bordeaux wines must be regarded as non-existing. If the well-known Bordeaux wines are advertised for sale at the same prices as used to be charged ten or fifteen years ago, or in times of exceptional abundance, such wines are not the growth of the vineyard under the name of which they are offered for sale. The prices of the commonest class of Médoc wines (*vin ordinaire*) have increased seventy-five to one hundred per cent. during the last decade. To buy pure genuine Médoc, or other well-known wines of this district, a far higher price must be paid for them than has been obtained for some years. The quantity of adulterated and falsified (so called) 'Bordeaux wine' exported at present annually is very considerable."

—It has been discovered that the flesh of the whale is both nutritious and palatable. Large quantities of it are eaten every fishing season by the men engaged in the capture of the fish, but still larger quantities are wasted. A Norwegian speculator was struck with the fact that some of the immense mass of food thus annually thrown away might be profitably preserved and utilized for consumption on shore. Acting on this idea he arranged with several whaling captains and two meat-preserving firms, and recently he gave a dinner by which, he believes, he has demonstrated that whale flesh may be cooked in various ways, and that it forms a delicious as well as a wholesome article of diet. Some parts of the fish supply materials for an excellent imitation of turtle soup, others resemble beef, and others are almost as white and quite as tender as chicken. The meat can be sold for about half the price of canned beef.

—Prince Bismarck is said to be a particularly intractable and ungrateful patient. He suffers from neuralgia, trifacial and sciatic, and gives his doctor a certain number of days to cure him. If the physician fails he is discharged, sometimes even before the

date allowed; if he succeeds he gets no thanks. The chancellor's wife is a homœopath, and also has much faith in a nerve medicine made of magpies' wings, designed especially as a cure for epilepsy. Such therapeutic measures as these are sandwiched in (and sometimes combined with) the treatment of men like Professor Frerichs. The present attendant is a young man of thirty-three, somewhat notorious for social scandals in Munich.

Correspondence.

THE DIGESTIBILITY OF LOBSTERS.

MR. EDITOR,—The inquiry of your correspondent reminds me that during three years' service at the Taunton Lunatic Hospital I had control of the diet of about four hundred and fifty patients. During the plentiful season all patients not acutely sick had well-boiled plain lobster for supper once a week. Many of the patients were gross feeders, and digestive disorder was by no means unknown among them, but not a single instance of disturbance from eating lobster came to my knowledge.

It is said that "the lobsters of commerce" are boiled for only ten minutes, to prevent loss of weight. The best housekeepers re-cook them, and find that boiling for half an hour renders them far tenderer and more digestible.

To infer that indigestion occurring after partaking of a mayonnaise of lobster, with other rich food, is necessarily due to the lobster is obviously illogical. The "lady," or stomach of the fish, also furnishes an instance of *undistributed middle*, or should do so. And it is unquestionable that safety especially requires it to be fresh, both before and after cooking. Obvious precautions being observed, I believe it to be excellent and wholesome food for all without idiosyncrasy against it.

Yours truly, NORTON FOLSOM, M. D.

THE LAST ENGLISHMAN OF NOTE TO DIE OF AGUE.

MR. EDITOR,—Absence from home prevented me from seeing the Boston Medical and Surgical Journal of July 12, 1883, till this week. In the issue of that date, on page 39, second column, is this statement: "Cromwell was the last Englishman of note to die of ague."

The following extract is from *The Complete Works of Andrew Marvell, M. P.*, by the Rev. Alexander B. Grosart, printed for private circulation, 1875. It may be found in vol. ii., p. 44 to p. 46 of the *Essay on the Life and Writings of Marvell*:—

"54 Harley Street, February, 1874.

"The course of my medical studies led me to consult Morton's *Pyretologia* a few days ago. In that book I found a full account of the sickness and death of Andrew Marvell. . . . Perhaps you may be willing that a physician should translate Morton's medical Latin into modern English. If so, take it as follows: 'In this manner was that most famous man, Andrew Marvell, carried off from amongst the living before his time, to the great loss of the republic, and especially

the republic of letters, through the ignorance of an old, conceited doctor, who was in the habit on all occasions of raving excessively against Peruvian bark as if it were a common plague. Howbeit, without any clear indication, in the interval after a third fit of regular tertian ague, and by way of preparation . . . blood was copiously drawn from the patient, who was advanced in years. . . . He died, who, had a single ounce of Peruvian bark been properly given, might easily have escaped, in twenty-four hours, from the jaws of the grave and the disease.' . . . This seems to me to be a deeply interesting addition to our store of facts respecting a true Englishman.

"SAMUEL GEE, M. D.,
"Fellow of the Royal College of Physicians, London."

The friend of Milton, the author of An Horatian Ode, the "patriot," member of Parliament for Hull, Andrew Marvell, certainly was an "Englishman of note." His death occurred August 18, 1678.

Yours truly, EDWIN FARNHAM, M. D.
CAMBRIDGE, MASS., September 25, 1883.

WAS IT A COINCIDENCE ?

MR. EDITOR, — A., aged nineteen years, while living in New York, was attacked with acute general eczema. He returned to Boston, and slept a few nights with his brother W., and afterwards with another brother, N. In about ten days W. and N. were both seized with this affection, and within a fortnight W.'s lady love also broke out with it. They were all healthy people, and had never before had any skin disease. Only two of the four were surrounded by the same hygienic conditions. Did one catch the disease from the other, or was it a coincidence ?

Duhring says : "Eczema is not contagious. It cannot be acquired from being in contact with or from handling the patient ; nor can it be taken from the discharge." M. D.

Miscellany.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

FORTY members of the profession from different parts of the country responded, either in person or by letter, in acceptance of a call to meet September 25th, in the rooms of the Academy of Medicine, New York, for the purpose of forming a new national society.

It was decided to name the organization "The American Climatological Association," and that the objects thereof should be the study of the Diseases of the Respiratory Organs, together with the influence of climate upon them.

Drs. Tyndale, of New York, Bruen, of Philadelphia, and Garland, of Boston, were appointed a committee to draft a Constitution and By-laws to be submitted to the next meeting, and the same committee was appointed temporarily a Board of Censors.

Drs. Garnett, of Washington, Donaldson, of Baltimore, Bosworth, of New York, Shurley, of Detroit, J. C. Wilson, of Philadelphia, were appointed a Committee of Arrangements for the annual meeting, which will be held in Washington either immediately before

or after the next meeting of the American Medical Association.

The following officers were then elected : President, A. L. Loomis, M. D., New York ; 1st Vice-President, F. I. Knight, M. D., Boston ; 2d Vice-President, W. H. Geddings, M. D., Aitkin, S. C. ; Secretary and Treasurer, J. B. Walker, M. D., Philadelphia.

THE PHILADELPHIA MEDICAL TIMES.

DR. HORATIO C. WOOD has retired from the editorial charge of the Philadelphia *Medical Times*, in which he is succeeded by the assistant editor, Dr. Frank Woodbury. The *Times* enters upon its fourteenth year with the number of October 6th. During the preceding years Dr. Wood has ably identified himself with its interests. Dr. Woodbury is well and favorably known to the readers of the JOURNAL, having represented Philadelphia upon its editorial staff for many years.

SCIENCE AND PSYCHISM.

ABOUT a year ago the Society for Psychical Research was founded in England "for the purpose of making an organized and systematic attempt to investigate that large group of debatable phenomena designated by such terms as mesmeric, psychical, and spiritualistic." This Society is looked upon hopefully as destined to accomplish, by the scientific character of its members and its proceedings, more than any of its predecessors have done in this department where prejudice and ignorance have so long stood in the way of accurate observation of phenomena. It is noticeable that it is the *phenomena* rather than theories explanatory thereof that the Society proposes to investigate. In the *Medical Press* (August 15th) we find a leading article descriptive of what has been already done. The writer, after speaking of the *personnel* of the Society as a goodly number of eminent and well-known men of reputation in the world of arts, letters, and science, says that special committees of its members have for some time been carrying out inquiries in connection with subjects which have elicited considerable discussion both in the press and out of it. Among these "thought reading," or, as it is called in preference, by the Society, "thought transference," has occupied the attention of a committee consisting of Prof. F. W. Barrett, and Messrs. E. Gurney, M. A., and F. W. H. Myers, M. A., formerly Fellows of Trinity College, Cambridge. The results at which they have arrived are communicated in two reports printed in the proceedings of the Society, and the second of which contains some details that are intrinsically interesting on account of the assurance they convey of complete absence of intentional deception. The substance of the reports is thus given in the article to which we refer : —

The subjects of the experiments narrated in these reports were, in one case, the daughters of a clergyman, a member of the Society, and in the other two gentlemen who voluntarily offered themselves to the observation of the committee ; and it may be once for all accepted that no suspicion of collusion, in the objectionable acceptance of the term, is to be entertained in respect to any of the trials.

The experiments conducted with the children referred to were mainly based on the power they respectively possessed to divine the thoughts of others who were concentrating their perceptions on a particular object. One set of results with a pack of playing cards is thus given: "With a full pack of playing cards 248 trials were made with one or more of the committee. Of these twenty-two were guessed completely right on the first trial, and eighteen on the second trial, or a total of forty quite right out of 248, or one right in not quite seven experiments." In addition there were sixty-nine cases in which the card was guessed in part correctly. Omitting the second correct guess, these results show one quite right in eleven experiments; if pure guess-work were the explanation there would have been one right in fifty-two experiments. In the above-mentioned series of trials the sister of the guesser was, as well as the committee, cognizant of the cards selected, but in a second set, during which the committee alone knew what had been chosen, sixty-four trials were made with figures ranging between ten and ninety-nine. The result showed one correct guess out of thirteen attempts, whereas pure guess-work simply would give one right in ninety experiments. At a subsequent date, the trials taking place this time in Dublin, Professor Barrett and the subject of the experiment, one of the children, aged fifteen, were seated alone in a room with their backs to each other; the words "hearts," "clubs," "spades," and "diamonds," were written down by Mr. Barrett, and one of these words mentally selected by him; especial care was taken to prevent any kind of movement which might assist the guesser to divine which of the four terms had been hit upon. Out of fifty trials the word selected was rightly named twenty-five times at the first attempt, and a second attempt gave the correct answer in another ten instances. It is noteworthy, too, that during the latter half of the time occupied by the experiment the guessing was slower than at first, and less successful, eighteen out of thirty first guesses being correct in the former, and but seven out of twenty in the latter.

In another series of experiments a "young mesmerist" afforded some very remarkable results, which but for the circumstances under which they were observed might be received with some degree of incredulity. The transference of *pain* impressions was noticed in the following way: A sofa cushion was held by one of the committee before the face of S., the "young mesmerist," who was in addition blindfolded, and thus doubly prevented from seeing the person (B.) whose sensations he was to repeat. Another committee man then pinched or otherwise hurt B., who sat opposite S., holding his out-stretched hand. S. in each case localized the pain in his own person after it had been kept up pretty severely on B. for a time varying from one to two minutes. The results are thus rendered:—

Part of B. made painful:—
Left upper arm.
Lobe of right ear.
Hair on top of head.
Left knee.

Answer of S. (by pointing):—
Left upper arm.
Lobe of right ear.
Hair on top of head.
Left knee.

The committee next drew a series of geometrical diagrams which were then placed in view of B., but in such a way that S. could not possibly perceive them by sight. In each case S. described them correctly, but with the difference that he reversed them

in position, that is, by describing the apex of a triangle, for instance, as below when it was drawn upright, etc. Further, after B. had attentively looked at drawings of the most fanciful description made by the committee, holding the while S.'s hand (the latter being blindfolded), S. reproduced the drawings in such wise that a close resemblance to the original was apparent, allowing for the blinded condition of his eyes, and in no case was there the smallest possibility that S. could have seen the figure, nor did B. touch S. while the figure was being drawn.

LEAD-POISONING FROM CANNED FOOD.

DR. MAGRUDER¹ describes a case of well-marked saturnine paralysis, which he traced to a contamination with lead of the tin lining of some cans containing corn, of which the patient, a lady, had partaken.

The corn was put up by a recipe that required the use of tartaric acid. The contents of several cans was tested, and the presence of lead detected. This must have been derived either from the coating of the cans or the solder, or both.

Upon applying a drop or two of nitric acid to the surface of the can, allowing it to dry, and adding a solution of iodide of potassium, there was found the characteristic yellow spot. The same test was then applied to a number of cans in which food had been preserved, and in all evidence of the presence of lead was found. A more extended chemical analysis of a number of scraps of tin of which cans are made found only two which did not show its presence.

The writer quotes other observers to show that much of the coating upon the cans is not pure tin, but an alloy with lead. We are not as yet in possession of any facts which show tin as forming any compounds with the vegetable acids which give rise to poisonous effects, either acute or chronic, but we do know that lead forms such compounds.

Among other authorities Dr. Thomas Antisell, principal examiner of chemicals in the Patent Office, makes the following statement: "It is well known that all commercial tin is alloyed with lead, even up to the grade known as pure tin-foil, and the manufacture of tinned cans for the canned-food industry must place the food so preserved in the condition most likely to contain lead salts mixed with the organic matter; this is particularly liable with canned fruit."

The writer quotes from *The Quarterly Compend. of Medical Science*, July, 1883, an account of an outbreak of lead poisoning among 150 men of a regiment in the Southern Tyrol, one case ending fatally, and forty-five requiring to be treated in hospital, besides others who were not disabled for duty. The cause of the outbreak was traced to the tin-lined copper vessel in which their food was cooked, the coating of which contained lead. This shows the danger of poisoning from the coating used in tinning. He concludes:—

"When we consider how much canned food is consumed we should expect to find reports of a very large number of cases of poisoning from this source if lead is present in the coating of the cans. But such is not the case. Very few, as far as I have been able to ascertain, have been reported. This may be owing to the fact that only a comparatively small number of

¹ Medical News, September 8, 1883.

physicians report cases. It may also be due to the fact that many minor forms of lead-poisoning have not been recognized and treated as such. Now there is no difficulty in diagnosing a case of well-marked lead-poisoning, but it is not so with slighter cases. Several other members of the family in which my case occurred complained of a bad taste, pains in limbs, general malaise, numbness of the hands and wrists, etc., which would not have been ascribed to that cause had not my attention been called to them in the other case. I found then the characteristic blue line on the gums. The first cases which occurred among the soldiers of Southern Tyrol, reported above, were treated as muscular rheumatism."

SAYRE ON CLUB-FOOT APPARATUS IN CASES OF CONTRACTURE.

DR. LEWIS A. SAYRE, in a clinical lecture reported in the *Medical and Surgical Reporter* (August 18th), speaks as follows regarding the application of corrective shoes in certain cases of talipes:—

"This boy, whom I here present to you suffering from club-foot, came to me from Sing Sing, and thinking the case would be of material interest and practical value to you, I have brought him here to-day to show you an instrument which he has been wearing, and which is called, I believe, the *extension* club-foot shoe, and is perhaps a more recent device for the treatment of this deformity than what I have hitherto brought before you.

"This boy is five years of age, and last fall the parents state that they noticed 'that the left foot was turning over and inwards.' In January, 1883, he was taken to the University College, and from there he was sent to the Dispensary at Fifty-Ninth Street, where they applied this extension club-foot shoe. The parents inform me that this instrument was applied four times daily, being left upon the foot for five minutes at each application. This is the second case that has recently come under my notice in which this instrument has been applied, and I cannot condemn its application too strongly, as being most inhuman in such cases as this.

"But before applying this instrument to the foot let us carefully examine this case before us and ascertain the condition of these tissues, which, at first appearance look to be contracted, but which, as I have previously examined the case, I know to be *contractured*; by this term I mean that these tissues have undergone structural change. To ascertain if this be true we now endeavor to flex the foot upon the leg, and by this means put both plantar fascia and tendo Achillis upon the stretch. You will now observe that, my assistant holding the foot in this position, I make point pressure upon these contractured muscles with my thumb, and instantly there is a spasm passes up the leg, and the boy cries with pain. This reflex spasm, which you here observe we secure in both tendo Achillis and plantar fascia, indicates that both tendon and fascia have undergone structural change, and are then what I call contractured. And no effort to stretch these tissues to their normal length short of rupturing them can afford the slightest possible relief. On the contrary it only causes inflammation in the parts and increases the deformity.

"The mother told me that the extension was made

with these instruments to the greatest point of endurance of the boy from January until the latter part of March, and that during this time the deformity has gradually been growing worse, and the boy has become so irritable and nervous from the torture he has endured from these instruments that she can do nothing with him, and has abandoned all treatment.

"I cannot impress upon you too strongly that when any tendon, muscle, or fascia has undergone this structural shortening, no amount of force short of actual rupture of the tissues can remove the deformity. Why, then, should you subject your patient to this constant agony of useless efforts to secure impossible results by such means as I have just shown you. How far more skillful and creditable, then, is it to the profession to perform the simple operation of tenotomy in such cases as these; you, by this means, at once relieve your patient of his deformity, and the pain, compared to rupture by mechanical force, is insignificant."

ALOPECIA PREMATURA.

THE *Edinburgh Medical Journal* reproduces from the *Berliner klinische Wochenschrift* (No. 16, 1883), the following note: O. Lassar has continued his observations on the nature of premature baldness, and has further convinced himself of the communicability of at least the form associated with daudruff. When the hairs which fall off in such cases are collected, rubbed up with vaseline, and the ointment so made is rubbed among the fur of rabbits or white mice, baldness rapidly makes itself visible on the parts so treated. That this is not due to the vaseline was shown by anointing other animals with the vaseline alone, which produced no effect whatever. He considers that the disease is spread by hairdressers, who employ combs and brushes to their customers, one after another, without any regular cleansing to these articles after each time they are used. During frequent visits to the hairdresser's it can scarcely fail that brushes are used which have been shortly before dressing the hair of one affected with so common a complaint as scaly baldness. Females, he thinks, are less often affected with this form of baldness, because the hairdresser more frequently attends to them at their own homes, and there uses *their* combs and brushes. In order to prevent, as far as possible, the commencement of alopecia prematura, the hair should be cut and dressed at home and with one's own implements, and these thoroughly clean. When it has begun, the following mode of treatment is suggested: The scalp is to be daily well soaped with tar or fluid glycerine potash soap, which is to be rubbed in for fifteen minutes firmly. The head is then to be drenched with, first, warm water, and then gradually colder water. A two per cent. corrosive sublimate lotion is next to be pretty freely applied. The head is then to be dried, and the roots of the hair are to have a one half per cent. solution of naphthol in spirit rubbed into them. Finally, a pomade of one and a half to two per cent. of carbolic or salicylic oil is to be used to the head. This treatment has now in many cases brought the disease not only to a stand, but the hair has been to a considerable extent restored.

— At Baden the use of live pigeons has been forbidden at the shooting matches.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 22, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	595	249	24.38	15.87	12.02	2.67	2.84
Philadelphia.....	846,984	347	125	19.72	18.27	2.03	3.51	6.67
Brooklyn.....	566,689	239	115	27.17	14.63	16.30	8.36	3.44
Chicago.....	503,304	239	124	29.68	9.20	11.29	5.02	5.44
Boston.....	362,535	169	62	28.91	18.88	15.93	6.49	3.54
St. Louis.....	350,522	192	69	36.93	10.92	4.68	5.20	10.92
Baltimore.....	332,190	165	74	28.48	17.57	10.30	.61	9.70
Cincinnati.....	255,708	81	33	14.76	7.38	9.84	4.92	—
New Orleans.....	216,140	130	42	25.38	19.23	4.61	—	.77
District of Columbia.....	177,638	68	30	20.58	10.29	8.82	1.47	—
Pittsburg..... (1883)	175,000	59	19	28.73	10.14	6.76	11.83	5.07
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	64	38	26.52	7.80	12.48	3.12	9.36
Providence..... (1883)	116,755	16	4	21.55	3.33	3.33	8.33	4.99
New Haven..... (1883)	73,000	20	5	30.00	10.00	15.00	10.00	—
Charleston.....	49,999	38	18	10.52	10.52	5.26	2.63	2.63
Nashville.....	43,461	23	9	8.70	34.80	8.70	—	—
Lowell.....	59,485	42	19	54.74	9.52	33.33	14.28	2.38
Worcester.....	58,295	16	5	—	—	—	—	—
Cambridge.....	52,740	21	—	23.80	14.28	14.28	—	9.52
Fall River.....	49,006	29	15	48.30	24.15	31.05	6.90	6.90
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	19	12	10.46	10.46	10.46	—	—
Springfield.....	33,340	14	4	14.28	14.28	14.28	—	—
Salem.....	27,598	8	3	25.00	37.50	25.00	—	—
New Bedford.....	26,875	6	0	—	—	—	—	—
Somerville.....	24,985	9	5	33.33	11.11	33.33	—	—
Holyoke.....	21,851	10	3	10.00	40.00	10.00	—	—
Chelsea.....	21,785	6	4	—	—	—	—	—
Taunton.....	21,213	8	1	—	—	—	—	—
Gloucester.....	19,329	7	1	28.56	28.56	—	14.28	—
Haverhill.....	18,475	4	1	—	—	—	—	—
Newton.....	16,995	6	1	16.66	—	16.66	—	—
Brockton.....	13,608	8	6	—	—	—	—	—
Newburyport.....	13,537	4	1	75.00	25.00	75.00	—	—
Fitchburg.....	12,405	4	2	—	—	—	—	—
Malden.....	12,017	8	2	—	—	—	—	—
Twenty Massachusetts towns.....	159,028	61	18	18.04	13.12	8.20	9.84	—

Deaths reported 2735 (no report from Buffalo): under five years of age, 1119: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 692, consumption 402, diarrhoeal diseases 282, lung diseases 198, diphtheria and croup 123, typhoid fever 108, malarial fevers 65, scarlet fever 50, whooping-cough 21, cerebro-spinal meningitis 15, small-pox 15, measles 10, puerperal fever eight, erysipelas four, typhus fever one. From malarial fevers, St. Louis 21, New Orleans 14, New York 11, Brooklyn six, Philadelphia and Chicago four each, Baltimore three, Providence and New Haven one each. From scarlet fever, Chicago 10, New York nine, Philadelphia eight, St. Louis seven, Baltimore five, Boston four, District of Columbia three, Brooklyn two, Fall River and Gloucester one each. From whooping-cough, New York seven, District of Columbia four, Brooklyn three, Baltimore and Pittsburg two each, Philadelphia, Chicago, and New Orleans one each. From cerebro-spinal meningitis, New York eight, Lowell two, Philadelphia, Chicago, Boston, Baltimore, and Providence one each. From small-pox, New Orleans 11, Philadelphia three, St. Louis one. From measles, New York three, Philadelphia, Brooklyn, and Chicago two each, Baltimore one. From puerperal fever, Brooklyn and St. Louis two each, Chicago, Pittsburg, Milwaukee, and Providence one each. From erysipelas, New York three, Brooklyn one. From typhus fever, Baltimore one.

In 40 cities and towns of Massachusetts, with an estimated population of 1,159,235 (estimated population of the State 1,922,530), the total death-rate for the week was 17.62 against 22.45 and 21.21 for the previous two weeks.

In the 28 greater towns of England and Wales, with an esti-

mated population of 8,620,975, for the week ending September 8th, the death-rate was 20. Deaths reported 3305: diarrhoeal diseases 463, acute diseases of the respiratory organs (London) 156, scarlet fever 96, fever 76, whooping-cough 51, measles 43, diphtheria 17, small-pox (Birmingham 12, Sunderland three, London and Hull one each) 17. The death-rates ranged from 14 in Oldham to 30.5 in Brighton; London 16.6; Birkenhead 17.6; Bristol 17.9; Nottingham 19.6; Leicester 21; Liverpool 21.9; Sheffield 22.8; Wolverhampton 24.2; Leeds 24.5; Birmingham 26; Manchester 28. In Edinburgh 16.6; Glasgow 23.4; Dublin 24.5.

For the week ending September 1st, in 168 German cities and towns, with an estimated population of 8,645,725, the death-rate was 25.4. Deaths reported 4226; under five years of age, 2336; consumption 514, diarrhoeal diseases 346, lung diseases 273, diphtheria and croup 144, scarlet fever 89, typhoid fever 68, whooping-cough 67, measles and röteln 42, puerperal fever 22. The death-rates ranged from 13.7 in Lübeck to 33.2 in Königsberg; Breslau 31.3; Munich 31.4; Dresden 28.3; Berlin 29.9; Leipzig 20.8; Hamburg 24.6; Cologne 21.3; Frankfurt 17.1; Strasburg 25.4.

For the week ending September 8th, in the Swiss towns, there were 34 deaths from diarrhoeal diseases, consumption 16, lung diseases 10, whooping-cough four, diphtheria and croup three, measles one, typhoid fever one. The death-rates were, at Geneva 10.3, Zurich 4, Basle 17.5; Berne 11.3.

The meteorological record for the week ending September 22d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in Inches.
Sept., 1883.																			
Sun., 16	30.018	62	66	66	93	84	93	90	E	E	S	2	8	8	O	C	O	—	—
Mon., 17	29.928	68	79	62	93	67	84	81	SW	W	NE	10	9	6	T	F	O	—	—
Tues., 18	30.245	58	65	53	74	42	51	56	N	SE	W	10	8	8	O	C	C	—	—
Wed., 19	30.313	60	69	51	74	59	71	68	NW	SE	SW	5	6	8	O	C	F	—	—
Thurs., 20	30.072	63	73	56	70	47	75	64	NW	E	W	7	6	4	F	O	O	—	—
Fri., 21	30.114	58	65	56	84	72	80	79	N	E	E	7	12	4	F	O	C	—	—
Sat., 22	30.241	53	62	45	100	75	93	89	NW	SE	S	3	7	3	G	C	C	—	—
Means, the week.	30.133	60	79	45				75										3.30	.04

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM SEPTEMBER 21, 1883, TO SEPTEMBER 28, 1883.

VICKERY, RICHARD S., captain and assistant surgeon. Relieved from duty in the Department of the Platte, October 1, 1883, and to report in person to the commanding general, Department of the Columbia, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

WEISEL, DANIEL, captain and assistant surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the commanding general, Department of the Platte, for assignment to duty. Paragraph 7, S. O. 211, A. G. O., September 14, 1883.

BREWSTER, WILLIAM B., first lieutenant and assistant surgeon. Granted leave of absence for two months from October 1, 1883, with permission to apply for an extension of four months. Paragraph 1, S. O. 107, Military Division of the Missouri, September 15, 1883.

STRONG, NORTON, first lieutenant and assistant surgeon. Now on duty in the field near Fort Thornburgh, Utah, to accompany command to Fort Douglas, Utah, and there await further orders. Paragraph 2, S. O. 107, Department of the Platte, September 17, 1883.

APPEL, AARON H., first lieutenant and assistant surgeon. The leave of absence granted July 20, 1883, extended one month. Paragraph 10, S. O. 211, A. G. O., September 14, 1883.

DE LOFFRE, A. A., captain and assistant surgeon. Assigned to duty at Fort Niagara, N. Y. Paragraph 5, S. O. 182, Department of the East, September 27, 1883.

HAVARD, VALERY, captain and assistant surgeon. Assigned to temporary duty at post of San Antonio, Texas. Paragraph 10, S. O. 120, Department of Texas, September 21, 1883.

REED, WALTER, captain and assistant surgeon. Relieved from duty at Fort Omaha, Neb., and assigned to duty as post surgeon, Fort Sidney, Neb. Paragraph 5, S. O. 103, Department of the Platte, September 22, 1883.

SHANNON, W. C., captain and assistant surgeon. Assigned to duty at Fort Bridger, Wyoming. Paragraph 3, S. O. 102, Department of the Platte, September 19, 1883.

APPEL, A. H., first lieutenant and assistant surgeon. Assigned to temporary duty at Fort Warren, Mass. Paragraph 3, S. O. 181, Department of the East, September 25, 1883.

CARTER, W. F., first lieutenant and assistant surgeon. Assigned to temporary duty at Washington Barracks, D. C. Paragraph 5, S. O. 182, Department of the East, September 27, 1883.

RICHARD, CHARLES, first lieutenant and assistant surgeon. Relieved from further duty at Creedmoor, New York, to return to his proper station, Fort Adams, R. I. Paragraph 1, S. O. 180, Department of the East, September 24, 1883.

AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine will meet at the New York Academy of Medicine on Tuesday, October 9th (three o'clock), and Wednesday, October 10th. The address, by Dr. H. O. Marcy, of Boston, Mass., President, will be delivered on Tuesday evening, October 9th, at eight o'clock, on The Recent Advances of Sanitary Sci-

ence; the Relations of Micro-Organisms to Disease (illustrated by micro-photographs projected upon the screen).

The following papers have been promised for the general meetings:—

Dr. L. S. Pileher, of Brooklyn, N. Y., on The Relations of Medical Journalism to Higher Medical Education in America.

Dr. Traill Green, of Easton, Penn., on The Imperfection of Technical Studies as a Means of Mental Culture.

Dr. Benjamin Lee, of Philadelphia, on The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine.

Dr. Charles McIntire, of Easton, Penn., Is it Fair? The Study of the Comparative Political Position of the Medical Profession in the United States.

Dr. A. D. Rockwell, of New York, on The Exact Value of the Electrolytic Method.

Dr. J. Cheston Morris, of Philadelphia, The Milk Supply in Large Cities.

Dr. Charles E. Cadwalader, of Philadelphia, Considerations upon the Public Provisions for the Care of the Indigent Insane.

Dr. A. D. Rockwell, of New York, The late Dr. George M. Beard, a Sketch.

Report of the Committee on Laws of Medical Practice in the United States and Canada (Drs. Dunglison and Marcy).

RICHARD J. DUNGLISON, M. D., Secretary.

SUFFOLK DISTRICT MEDICAL SOCIETY.—The meetings of the Section for Gynecology and Obstetrics will be held on the third Wednesday of each month. Members desiring to present communications are requested to send the titles of their papers to the Secretary at as early a date as possible. The first meeting will be held on October 17th at 19 Boylston Place, at eight p. m. Dr. C. P. Strong will report an Unusual Case of Obstetrics.

J. B. SWIFT, Secretary, 78 Charles Street.

SUFFOLK DISTRICT MEDICAL SOCIETY.—The Section for Clinical Medicine, Pathology, and Hygiene will meet at 19 Boylston Place, on Wednesday, October 10th, at 7.45 o'clock. The following papers will be presented: Dr. G. L. Walton, The Neglect of Ear Symptoms in the Diagnosis of Diseases of the Nervous System. Dr. A. F. Holt, Medical Examiner for Middlesex, Sudden Death from Hæmorrhage from the Hepatic Vein. Dr. George B. Shattuck, Kairin as an Antipyretic in Typhoid Fever, with cases.

ALBERT N. BLODGETT, Secretary.

GYNÆCOLOGICAL SOCIETY OF BOSTON.—The next regular meeting will be held on the second Thursday of October, at the Medical Library Rooms, at four o'clock p. m. M. D. Church, M. D., will read a paper on Post-Uterine Abscess. Lunch served at close of session.

HENRY M. FIELD, M. D., Secretary.

DEATH.—Dr. James A. Fleming died at the Massachusetts General Hospital, September 30th, at three p. m., of typhoid fever, supposed to have been contracted while in camp with the Ninth Regiment, M. V. M., of which he was surgeon.

Original Articles.

POSSIBLE CEREBRAL ORIGIN OF THE SYMPTOMS USUALLY CLASSED UNDER "RAILWAY SPINE."

BY G. L. WALTON, M. D.

RECENT investigations have shown that the terms "spinal concussion" and "railway spine," long in use to designate a set of symptoms following severe injury, are not only inexact, but misleading, in that they direct attention to the spine as the seat of a disturbance which may be, in part at least, situated in the brain.

In the extensive literature on "railway spine" attention seems for a long time to have been drawn away from the fact that the brain is at least as liable to injury from a jar as the spinal cord, while under the ambiguous name "spinal concussion" have been grouped all the nervous symptoms following accident, even in those cases in which organic lesions have been found in the spine on post-mortem examination. This is evidenced, for example, in the work of Erichsen on this subject.

In 1881 Dr. Hodges¹ made an important step towards the classification of these injuries by insisting on the separation of the organic from the inorganic affections of the spinal cord following accident.

Page² has shown that the former are exceedingly rare as long as the vertebral column remains intact. With regard to inorganic injuries to the cord in an accident he regards the term spinal concussion as one having little or no support in fact, and is inclined to class the symptoms hitherto attributed to spinal concussion under hysteria without committing himself to any exact theory as to the physiological sequence giving rise to the hysterical condition.

Dr. J. J. Putnam,³ after reporting two cases in which typical hysterical symptoms were found following injury, has emphasized the importance of seeking among the seemingly vague set of symptoms those which are typical of hysteria, a disease generally acknowledged to have its seat in the cerebral (certainly not in the spinal) centres.⁴

That the brain should be the chief sufferer from an accident rather than the spinal cord seems reasonable, both in consideration of its physiological and of its anatomical relations.

With regard to the former, the cerebral centres represent a far higher development of function, and to perform this function must have a more delicately organized intimate structure than the lower centres of the cord, which preside over the more simple reflex activities of the body. This fact alone should render them more liable to derangement from a jar as resulting from a fall or collision in which both brain and cord must participate.

With regard to the anatomical relations of the two organs, the spinal cord hangs suspended in a cavity much larger than itself, and is surrounded by an amount of loose areolar adipose tissue and fluid so great in relation to its own weight as to diminish materially the liability to injury from a shock; the brain, likewise enclosed by an unyielding case of bone, and itself much heavier than the cord, lies in compar-

atively intimate connection with its case, the dura mater of the brain forming, in fact, the periosteum of the skull. Certainly the facts bear us out in the supposition that the cerebral centres do suffer, whether directly or reflexly, for although pain in the back, weakness in the extremities, etc., seem generally to draw attention to the spine, these symptoms are rarely unattended by irritability, fretfulness, emotional tendency, and inability to confine the attention. These can only be the result of derangement in the higher cerebral centres. Now if careful search elicits such abnormalities of sensation and motion as can only be attributed to cerebral disturbance, it must be acknowledged that the brain rather than the spinal cord is to be credited with being the chief seat of the difficulty. This conclusion is alone a great step towards clearing up these cases, whether the disturbance of function in the cerebral centres be considered due to simple concussion, vaso-motor irregularity, or to reflex influence from injury to other (for example, abdominal) organs. The physiological arguments on the latter points are still so obscure as to render it hardly advisable to discuss them here.

The practical importance of seeking to classify the nervous symptoms resulting from injury is evident. "Railway spine" has offered and will continue to offer a frequent subject for litigation, and any classification of symptoms which will enable us to bring it, if only in part, under a form of disease already understood, and which will enable us to distinguish the real from the feigned, must be of the greatest practical value.

That such symptoms really do exist is shown, for example, by a case recently reported in its main particulars by Dr. Putnam,⁵ and fully by the writer.⁶ The case was that of a fireman, not a claimant for damages, who, after a severe fall on his side from his engine, suffered, amongst other symptoms, from mental excitability and despondency, with a tendency to weep on slight provocation. Examination revealed left-sided hemiparesis and hemianæsthesia limited sharply by the median line. He also had lost to a certain degree, and in the manner characteristic of hysteria, the senses of sight, hearing, smell, and taste on the left side. The temporary disappearance of the symptoms on the application of the magnet showed that they were of functional, not organic, origin, and their seat (involving the head and special senses) absolutely precluded spinal origin.

In this case at least these symptoms enabled us to classify the nervous injury under the head of hysteria. Not the vague hysteria of former times, but the functional disturbance of the cerebral centres which modern research, as set on foot by Professor Charcot, has shown to follow given laws, and to offer pathognomonic characteristics.

The importance of always searching for hysterical hemianæsthesia in cases of injury is the greater in that just this set of symptoms, besides failing to attract the patient's attention, may, and frequently does, pass under the eyes of careful medical observers unnoticed unless especially sought for.

It may be well at this point to mention briefly the chief symptoms to be looked for in establishing hemianæsthesia in a hysterical patient or in a sufferer from "railway spine."

It is not in place here to mention the numerous pre-

¹ Boston Medical and Surgical Journal, vol. civ., p. 861.

² Injuries of the Spine and Spinal Cord, Herbert W. Page, A. M., M. C. Philadelphia. 1883.

³ Boston Medical and Surgical Journal, September 6, 1883.

⁴ Dr. Putnam informs me that since the publication of his article he has met with a third case suffering from typical hysterical hemianæsthesia after accident (railway).

⁵ Boston Medical and Surgical Journal, September 6, 1883.

⁶ Archives of Medicine, New York, July, 1883.

cautions and counter-tests always necessary in examining into subjective conditions. The left side is by far the oftener attacked. On the side affected loss of sensation appears, varying in degree from inability to feel a light touch to complete loss of feeling, so that a pin can be thrust through a fold of the skin while the patient's eyes are closed without his knowledge. It is, perhaps, not superfluous to remind the observer that the eyes must invariably be closed during the testing, for if the patient sees, he is apt to think he feels, that his skin is touched. This is, perhaps, the principal reason why the anæsthesia generally escapes the patient's notice. If doubt exists as to loss of sensation, comparison with the corresponding point on the other side of the body is an essential aid unless that side happens to be also anæsthetic. The disturbances of special sense (though rarely suspected by the patient on account of their unilateral character), when present, offer marked peculiarities. Substances readily smelled with both nostrils open are unperceived (supposing the anæsthesia to affect the left side) with the right nostril closed. If the tongue be protruded with the eyes shut and the patient told to draw it back when he tastes anything, it remains quiet while quinia, for example, is placed on the affected side, but is drawn back instantly when it is placed on the other.

The sight with the affected eye is feebler than with the right, the field of vision is concentrically retracted, and the patient is unable to distinguish certain colors with the unaffected eye closed. The first to disappear is generally violet, then green and yellow; red and blue usually persisting unless the degree of anæsthesia is excessive.

The hearing (allowance being of course made for disease of the ear itself) is less acute on the affected side, perception for sounds conveyed through the bone and that for high tones being first lost.

Symptoms not to be overlooked are mental irritability and emotional tendency.

In order to absolutely establish the diagnosis a large horse-shoe magnet, or electro-magnet, should be placed near some spot of the anæsthetic side and left quietly there for say an hour. In the majority of cases the anæsthesia will be diminished, and perhaps entirely disappear or pass to some other part of the body, oftenest to the corresponding spot on the other side, which constitutes the so-called transfer.

The fact that many observers claim that the mind and not the magnetism is the potential factor in this phenomenon does not lessen its diagnostic value, as its presence in either case absolutely establishes functional anæsthesia.

With regard to the motor functions in this disease, there exist as a rule a certain degree of paresis affecting all the muscles of the side involved, so that the grasp, for example, as measured by the dynamometer, is decidedly feebler than on the sound side.

The reflexes are generally altered in character, degree, or both, the tendency being towards exaggeration.

The writer has recently had opportunity to examine a patient exhibiting the symptoms of hysterical hemianæsthesia in a characteristic manner, with no plausible explanation of their origin except the explosion of a shell in the patient's vicinity. The case, though not coming under the class ordinarily designated "railway spine," is interesting in connection with the discussion of that subject, as strengthening one link in the chain of evidence, in that it substantiates the fact

that hysterical hemianæsthesia may follow a mechanical shock.

It should also be remarked beforehand that the purely functional symptoms in the case were complicated to a slight degree by the presence of certain organic changes for which no other plausible origin can be found than the concussion produced by the accident. These organic changes are atrophy of the optic nerves (probably secondary to the concussion), rupture of both drumheads and purulent inflammation of both middle ears, and (probable) hæmorrhage into the inner ear on the right, which was the side on which the shell exploded.

The temptation is great to assume an organic origin for the symptoms which have been classed as hysterical, but careful study of their nature renders such an assumption extremely improbable.

The patient, examined in conjunction with Dr. H. W. Bradford and Dr. E. D. Spear, is a man forty-one years of age, an American, formerly a lamplighter. There seems to be nothing in his family history pointing to nervous or mental disease. He was himself well and stout until he entered the army in 1861. Up to this time his sight and hearing were good. In 1862 a shell exploding near him he staggered to a tree unable to see or hear. Sight was recovered, and hearing to a certain degree. From this time on the patient experienced recurring "blurs" before his eyes, with intervals during which he saw very well. From the time of the accident the hearing remained so poor that the patient's neighbor had to pluck his sleeve in order that he might answer to his name at roll call, and he became unfit on this account for single picket duty. The hearing was from the first worse on the right.

In October, 1864, he was shot through the left thigh, the ball doing also some injury to the testicle. Patient remained about three months in the hospital, during which time he remembers numerous attacks of blindness similar to those experienced after the bursting of the shell. When he began to walk about in the hospital he was troubled by pains in the back, running down the leg, and in the testicles. On attempting to walk at that time he found that motion was greatly impaired in the left leg, which was atrophied, felt numb, and was drawn up so that the heel could not be put to the floor. The leg shook violently on attempts at motion. The flesh and strength returned in the left leg in perhaps two years, though the patient has noticed ever since the war that motion was not so strong in the left as in the right limb, and that the toe is inclined to drop in walking. He complains now of no pain anywhere, but of occasional "drawing" and "crawling" sensations in the back of left leg, numbness in the left hand and fore-arm, and sometimes a sensation of being struck in the back. No shooting pains, never saw double, no gastric symptoms, never head-ache. Occasional attacks, of short duration, of dizziness with tendency to whirl round (he does not know in what direction), nausea, and buzzing in the left ear. Patient is much more irritable than before the war, but shows no loss of memory or power of concentration. There is a history of loss of sexual desire and power dating from time of the war. He has noticed ever since that time that the strength of the left arm, formerly nearly or quite as good as that of right, is much impaired. Patient denies venereal infection, even gonorrhœa, and says that he has never been subject to sore throat, and has neither had eruption on his body, nor falling out of hair. He relates

that while soldering about two years ago some of the hot solder ran through the fly of his pants and burned the back of his penis. The only history of severe injury to be elicited, other than the explosion, is that some months after leaving the hospital in 1862 he was struck on the head by a freight train drawn by mules. He was knocked down, somewhat stunned, but was able to get upon the car. Recovery said to be rapid, and without nervous or other symptoms.

Physical examination. The patient is a short stout man of intelligent mien and good muscular development, excepting that all the muscles of the left arm are decidedly smaller and less resistant than those of the right.

On the scalp exists a cicatrix high up in the occipital region a little to the left of the median line. This cicatrix is broadly linear, two and one half centimetres in length, non-adherent, non-sensitive, and shows no loss of substance. On the dorsum of the penis, well back from the glans, appears a superficial white oblong cicatrix, 0.7 centimetre in length.

The cicatrices representing the course of the shot received in the thigh are as follows: a horizontally linear cicatrix 2.5 centimetres in length, situated at the outer extremity of the fold of the left buttock, and showing considerable loss of substance; a horizontally linear cicatrix 1.5 centimetres long on the inner side of anterior surface of the left thigh, opposite the scrotum, representing considerable loss of substance, quite sensitive, pressure on it causing tingling sensations down the leg; a linear cicatrix four centimetres in length on the outside of the left scrotum, running downwards and inwards from a point opposite the cicatrix on the thigh, and forked at its upper end; a small cicatrix in the posterior perineal region (where the ball was extracted).

No enlarged glands found. The pupils are of average size, alike, and react both to light and to (attempts at) accommodation. The patient's gait is somewhat uncertain on account of blindness, but is not ataxic; the only peculiarity noticed is a slight tendency to scrape the left toe in walking.

Motion. No ataxia. On testing the strength of the various muscles all muscles on the right side prove very strong, those of the left arm and leg only fairly so. The grasp as measured by the dynamometer bears the relation of (left) 22 to (right) 40, repeated trials giving the same result.

Measurements of the upper arm show (right) 30.5 centimetres, (left) 29.5 centimetres. Fore-arm (right) 27.5 centimetres, (left) 26 centimetres. Calf (right) 33.5 centimetres, (left) 33.5 centimetres. Reactions to the faradic current, strong on the right, are lessened on the left. Patellar reflex is increased on both sides, especially on the left.

Sensation. All forms of sensation are markedly diminished on the entire left side to the median line, with the exception of an area over the abdomen bounded above by the line of the ribs, below by Poupart's ligament, and outwardly by the axillary line (the line of demarkation is quite sharp, but the above is only an approximate description of its situation). The diminution of sensation is somewhat less on the head and face than on the trunk, but is bounded here also sharply by the median line. A pin can be thrust through a fold of the skin on the left leg without causing the least pain, and only strong pressure is perceived at all. All attempts to surprise the patient by painful stimuli over the anæsthetic area prove futile.

Special sensations. The senses of *smell* and *taste*, normal on the right, are entirely absent on the left. The general anæsthesia is marked on the inside of the mouth, and pinching of the left side of the tongue is not felt. The left side of the tongue shows signs of having been severely bitten (probably due to the anæsthesia, the patient stating that he finds himself very awkward in the mastication of his food on the left side).

Sight. The patient can only distinguish light from darkness.

Hearing. On the right absent for all sounds both by air and bone. On the left greatly impaired for all sounds by the air. Low voice only heard at one foot. All tones heard equally well up to 35,000 vibrations (König's rods). The tuning-fork on the teeth is heard only on the left. A large tuning-fork placed on the left mastoid bone is heard with difficulty even with the ear shut (indicating defective hearing for sounds through the bone on the left).

Examination of the eyes by Dr. Bradford shows white atrophy of both disks.

Examination of the ears by Dr. Spear shows old purulent inflammation of both middle ears, with cicatricial healing of the membranes.

This case, though not coming under the head of those commonly classed under "railway spine," is interesting in this connection as illustrating the fact that a distinctly hysterical hemianæsthesia may follow cerebral concussion. There seems no other plausible way of explaining the symptoms excepting through injury by shock, as there is nothing in the patient's antecedents or in his own temperament previous to the injury to lead to a suspicion of simple hysteria, a disease of great rarity in the male. The supposition of cerebral hæmorrhage or tumor as causing this set of symptoms, involving equally all sensory and motor functions of one side of the body, is improbable in the extreme, while the impairment of these functions is so characteristic of hysteria as to render this the only probable explanation. The complete deafness in the right ear and the complete blindness, although probably also resulting from the injury, must be looked on as extraneous to the hysteria.

With regard to the hearing. The immediate result of the concussion from the bursting of the shell was probably the rupture of both drumheads, and the starting of an inflammation in both middle ears. The absolute deafness by the bone on the right renders it not improbable that still further lesion of the auditory structures took place, perhaps a hæmorrhage into the inner ear. The deafness in the left ear is about that which would naturally result from a purulent inflammation, excepting, perhaps, the slight deafness by the bone. Whether this is due to the inflammation, to the hysteria, or to deeper lesion, similar to that on the right, it is impossible to determine, but the latter seems eliminated by the fact that all tones are heard up to 35,000 vibrations.

The blindness (which is so excessive as to mask the amblyopia characteristic of hysteria which would have been expected on the left) is of course due to the atrophy of the optic nerves, a result of cerebral concussion not without precedent.¹ That this atrophy is

¹ Erichsen (Concussion of the Spine, 1875, page 236) says: "If such serious organic mischief can declare itself in the interior of the globe as a consequence of a general jar or shake of the head, it is not unreasonable to suppose that in many of those cases that we witness, in which, after a general shock to the system, obscuration

due to an attack of typhoid fever from which the patient suffered two years ago is negated by the fact that atrophy was diagnosed at the Eye and Ear Infirmary previous to that sickness. The fact that this patient was a claimant for legal restitution can have but little influence on the genuineness of the symptoms. In the first place the hysterical symptoms were not at all essential to his claim, and in the second place they were so absolutely typical of a disease as yet little known, even amongst the medical profession, as almost to preclude simulation, to say nothing of the repeated unsuccessful attempts to expose deceit.

The fact being tolerably well established that the patient's condition results from injury, it is not important for us to discuss the question whether the accident on the railway or the explosion of the shell was the aetiological factor. The apparent greater severity of the latter shock, together with the fact that the deafness and other symptoms, as far as can be learned, dated rather from the time of the explosion, seem, however, to throw the weight of evidence in favor of that accident.

With regard to the question of syphilis, there is no way of deciding absolutely whether the alleged is the real cause of the cicatrix on the penis, but in the absence of other symptoms we have no right to assume that this disease exists, because of the cicatrix.

THE NEGATIVE ARTERIAL PULSE.

BY A. T. KEYT, M. D.

THE object of this communication is to present the negative arterial pulse. With the positive arterial pulse all are familiar, but the idea of a negative pulse of the arteries, so far as I can learn, has not hitherto been advanced.

First in 1874, when tracing with Marey's sphygmograph the radial pulse of a boy affected with disease of the heart, I obtained a distinct inverted trace, which I then interpreted as of pathological significance. Subsequently, in practicing with my own instrument, I have constantly encountered this phenomenon, and have come to learn that it is the negative arterial pulse, normally existing, and revealed in an inverted trace when the instrument is applied to the artery in a particular way.

The negative pulse may be demonstrated in all the larger superficial arteries by placing the explorer closely by the side of the artery instead of directly

upon it, as when the ordinary positive trace is obtained. The negative trace, compared with the positive, is inverted and of smaller amplitude, and presents more distinctly the smaller secondary waves (those occurring during the time of closure of the sigmoid valves); also



FIG. 1.

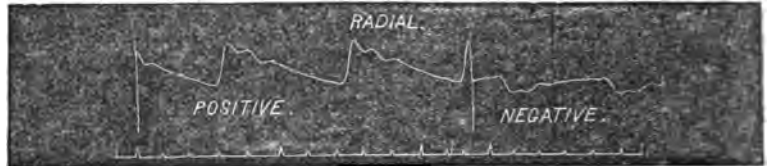


FIG. 2.

its respiratory undulations are more marked, and usually the trace is best taken at a lower pressure. It corresponds with the positive in general form, in the number and relative position of the secondary waves, in the aortic notch, and is exactly synchronous with it in primary start and each individual phase throughout. In demonstration of these statements the accompanying figures of traces are given.

Fig. 1 shows the carotid, negative and positive. Fig. 2 shows the radial, positive and negative. Fig. 3 shows the dorsalis pedis, positive and negative. And Fig. 4 shows the same carotid positive and negative, taken simultaneously. These traces speak for themselves; with regard, however, to Fig. 4 a word of explanation may be added. To obtain the two kinds of traces from the same carotid simultaneously required a particular adjustment of the explorers, which was found



FIG. 3.



FIG. 4.

only after repeated trials. The vertical lines cutting the traces were made by the writing levers respectively with the slide at rest; and, cutting the traces as they do, they demonstrate the exact synchronism between the negative and positive pulses.

MECHANISM OF THE NEGATIVE ARTERIAL PULSE.

The mode of production of the negative arterial trace has been to me a puzzling problem, but I believe now its solution is found in the locomotion of the arte-

and impairment of vision gradually manifest themselves, and in which white atrophy of the optic disk is discovered by ophthalmoscopic examination, the injury to the eye, functional and organic, is due to a shake or jar of its nervous structures, by which their nutrition becomes seriously but slowly impaired, and organic changes become secondarily developed in them."

ries. With each cardiac systole the arteries, in addition to expansile movements, rise *en masse* from their beds, and with each cardiac diastole they, in addition to retractile movements, fall back to their beds. This change of place must occasion a pushing out of the tissues over the spot towards which the artery moves, and a simultaneous drawing in of the tissues over the spot from which it moves. The locomotion will be in the direction of least resistance, and in the case of superficial arteries is likely to be to one side as well as forwards. If a visible superficial pulse, notably the radial, be watched, the artery appears to roll to one side in systole and fall back in diastole; the contiguous integuments simultaneously rising at one spot and falling at another.

Now if the explorer be placed fairly over the artery it receives the force of the locomotion as well as the expansion, and so is pushed up in systole, causing to be registered the positive arterial pulse; whereas if the explorer be placed by the side of the artery over the spot from which the latter moves in systole it is affected by an aspiration, and so is drawn down in systole, causing to be registered the negative arterial pulse. Moreover, impingement of the instrument in this situation tends to facilitate the arterial displacement. The positive trace falls in diastole in consequence of emptying and retreat of the artery, while the negative rises in diastole in consequence of return of the artery to its apposition with the explorer. The secondary waves of the negative traces are the same as in the positive, because the delicate contact of the explorer is sufficient to receive their impression as transmitted along the artery; and the small diastolic waves are more distinct in the negative because the lighter pressure is more favorable for their reflection, the pressure in the case of the positive trace almost, if not quite, obliterating the arterial lumen in diastole. Also, for the same reason (lighter compression of the artery), the respiratory undulations are more marked in the negative line.

The characteristics given unmistakably stamp the trace under consideration as of arterial origin. The negative venous trace, where obtainable, differs essentially from this in form and in chronometry; besides the vein would be effectually collapsed by the pressure employed to develop this trace.

The demonstration of the negative arterial pulse adds an interesting fact to our knowledge of the physiology of the pulsations, and one whose utility is already apparent, in that its recognition will relieve the study of the negative venous pulse from a source of confusion in fact seriously encountered.

THE NEGATIVE CARDIAC TRACE.

This is a proper place to allude to the negative trace of the pulsations of the heart, a phenomenon already recognized, but whose explanation has not been entirely satisfactory.

The negative cardiac trace is usually of less amplitude than the positive, although in some cases it equals or even exceeds it, and in some again only the negative can be obtained. Its main descent begins synchronously with the main ascent of the positive, and it marks the same duration of systole and diastole;

the secondary waves also correspond in number and position with those of the positive.

Fig. 5 shows simultaneous traces of the same heart, taken both positively and negatively. The vertical lines show the synchronism between the traces.

With regard to the mechanism of production I believe it is similar to that of the negative arterial,

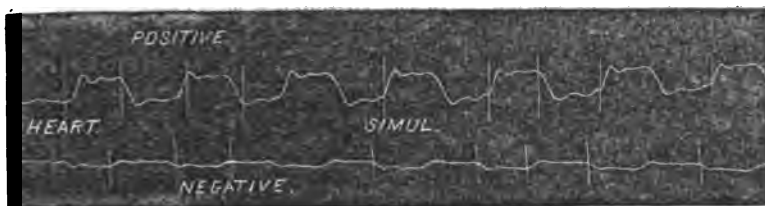


FIG. 5.

namely, by a rhythmical locomotion of the organ. With a certain position of the explorer the heart glides or rolls from under it in systole and returns to it in diastole, causing the negative trace; whereas when the explorer is placed fairly over the spot of greatest positive impulse the heart presses it in systole and remits the pressure in diastole, causing the positive trace. Cardiac aspiration from reduction of volume, although conceivable as a possible factor, does not of itself afford a sufficient explanation, for cardiac reduction of volume can only begin a notable time after the beginning of systole, whereas the negative cardiac trace begins, as demonstrated, synchronously with systole.

THE MANAGEMENT OF PATIENTS DURING CAPITAL OPERATIONS.¹

BY GEORGE W. GAY, M. D.

THE object of this paper is to call attention to the management of patients while they are undergoing severe and critical operations. As it is oftentimes the little things which tell in these cases, and which go far toward deciding the result, we shall dwell especially upon their importance, and hope not to be thought trivial in so doing.

A brief narration of three cases which have lately been under our care at the Boston City Hospital will illustrate our ideas upon the subject much better than would any abstract remarks.

CASE I. While walking upon the sidewalk, March 17, 1883, Mr. S., aged fifty-two years, was thrown into the air by an explosion of ignited gas in an adjacent cellar, and fell into the excavation amidst paving stones, bricks, and other debris. Having been brought to the hospital within an hour of the accident, he was found to have sustained a compound comminuted fracture of the left tibia into the knee-joint. The leg was enormously swollen, tense, blue, and cold, and there was no pulsation in the tibial arteries. Above the knee was a large, ragged wound extending deeply into the bruised tissues of the thigh.

The patient had evidently lost considerable blood from subcutaneous hemorrhage, and he was in a partial collapse. He was conscious, but restless; pulse weak and rapid; skin pale and cold.

Nothing whatever was given by the mouth, as a

¹ Read before the Boston Society for Medical Improvement, June 11, 1883.

pretty extensive accident-room experience has proved to us that food and stimulants poured into the stomach of a person while in collapse do no good, but on the contrary sooner or later produce vomiting, and thereby increase the prostration. A stimulant dose of morphine (one eighth of a grain) was given subcutaneously, and warm injections of brandy and water were given by the rectum. He was surrounded with heaters, covered with blankets and a rubber sheet, and kept as quiet as possible.

In an hour or two the patient had rallied sufficiently in our opinion to undergo a rapid amputation of the thigh. Everything being in readiness a little ether was given, and at the earliest possible moment the limb was quickly removed by transfixion at the junction of the lower and middle thirds. As soon as the bone was divided the anæsthetic was taken away, and no more was given. The result was that the patient was unconscious but a few moments, and regained his senses long before the vessels were secured and the stump was dressed. There was very little additional shock resulting from the operation, and the vomiting was unimportant.

The treatment pursued before the operation was continued for several hours after it, when small quantities of milk punch were given by the stomach and retained, and the question of nourishment gave us no more trouble. Omitting all details of the convalescence, suffice it to say that the patient made a good recovery.

CASE II. Thomas G., an expressman, twenty-two years of age, was brought to the hospital January 11, 1883, suffering from a large sarcomatous tumor of the left thigh. The disease was of six months' duration, and began as a small, tender bunch over the internal condyle of the femur.

When first seen by us it involved the lower half of the thigh, and was discharging large quantities of a dirty, sanious fluid. The glands below Poupart's ligament were slightly enlarged, but the abdominal cavity was apparently free from disease.

The patient was in a state of extreme exhaustion. Pulse 150. Temperature 103° F. Pale and emaciated, but there was no cough, vomiting, nor diarrhoea. It having been explained to him that an amputation, though attended with danger, was the only measure that promised relief to his suffering or could prolong his life, he requested that it should be done. For a few days efforts were made to improve his condition by means of liquid food, stimulants, tincture of digitalis, and tincture of nux vomica.

When ready for operation he was brought from the ward in his own bed, surrounded by heaters and covered with blankets and a rubber sheet. A very little ether having been given he was quickly transferred to the operating table, still covered up warmly, and the thigh was amputated as rapidly as possible by the circular method at the middle third. The ether was at once stopped, not over three ounces having been used, and in three minutes the patient was conscious. There was almost no shock from the operation, no vomiting, and in twenty-four hours the temperature was normal, and the patient "felt better than he had for months."

During convalescence he was free from pain, ate heartily, and grew fat. The wound healed kindly, with the exception of a small spot over the end of the femur, which became pale and cedematous, and looked like the original disease. The glands in the groin also began to enlarge.

Five weeks after the amputation a second operation was done for the purpose of removing the remainder of the femur. A long incision was made on the outer surface of the stump, the head of the femur disarticulated, and the bone carefully dissected out. The operation was necessarily of considerable length, the hæmorrhage was pretty free, and the shock was marked.

The contrast in the effect upon the patient of the two operations was very characteristic. In the first instance, although he was in a miserable condition, yet after a severe but quick operation he rallied almost instantly, while in the second case he was in a comparatively good condition, and yet after a prolonged operation the prostration was very severe. He finally rallied however, and got nearly well, when he was seized with pleuro-pneumonia, and died in a week.

CASE III. R. H., conductor, about twenty-seven years of age, was run over by a horse-car January 19, 1883, and received a compound fracture of the left tibia and fibula at the lower part of the middle third. The line of fracture was very oblique, and the tissues were considerably bruised.

Treatment consisted in placing the limb in a "plaster posterior" splint, and applying compound tincture of benzoin under carbolized gauze. Profuse suppuration and necrosis followed, and after several weeks the fragments were carefully adjusted and wired together.

In spite of all our efforts the patient gradually failed, and all hopes of saving the limb were abandoned. The pulse was rapid and feeble, the temperature was high; he was pale and emaciated, and suffered from chills, sweats, and great irritability of the nervous system, being delirious at night; his appetite was poor, but there was no vomiting nor diarrhoea.

It was evident that an amputation of the leg was the only means which could save his life, but it was the general opinion of the surgeons who saw him in consultation that he would not survive the operation over thirty-six hours.

A rapid amputation was completed March 18th under the same precautions as were used in the last case. The utmost care was taken to prevent shock and exhaustion by saving as much time, blood, and animal heat as possible. The result was all that could have been desired. The patient rallied well from the anæsthetic a few moments after the leg was removed, and his temperature fell five degrees inside of twenty-four hours. Convalescence was rapid, and the stump was healed in a fortnight.

The idea pretty generally prevails that in these days of anæsthetics time is of little or no consequence in doing capital operations. I do not accept this view of the matter. Experience has taught me that in the class of cases under consideration the more quickly the operation is completed, and the earlier the patient is allowed to rally from the anæsthetic, the less will be the subsequent shock and exhaustion. This fact is particularly noticeable in children, in whom a temporary collapse is not uncommon after a severe or a prolonged operation. There can be no doubt that a long operation is debilitating to the nervous system of any one, even when it is done without pain or without the loss of much blood.

It is claimed by some that as sulphuric ether is a powerful stimulant when injected under the skin, its inhalation is therefore beneficial in cases of great prostration requiring an operation. While the primary effects of this agent when inhaled are stimulating, the

ultimate result has seemed to us to be depressing, and especially so in those persons prostrated by injury or disease.

Usually the pain experienced by patients in the later stages of an operation is not detrimental. It is momentary, and soon forgotten, as they are still somewhat dazed by the anæsthetic. An opiate given previous to the operation also tends to allay suffering and produce quiet. Moreover, the pain seems to be less severe toward the close of an operation than it is at the commencement. Every surgeon must have noticed this fact in connection with operations about the face, when it is oftentimes not practicable to keep the person completely under the anæsthetic. Fear and dread are to a great degree absent when an operation is well under way.

These facts have led me to remove the anæsthetic at a much earlier stage in many operations than is the general custom, and I think with beneficial results to the patients.

In concluding we would urge that special attention be paid to the following particulars while doing critical or capital operations:—

If shock or collapse be present put nothing into the stomach, but stimulate and nourish by the skin and rectum.

Take extra pains to keep the patient warm by means of heaters, blankets, and a rubber sheet.

Disturb him as little as possible with examinations, moving, changing of clothes, or dressings, etc.

Use the least possible quantity of the anæsthetic, and allow the patient to rally early, depending upon opiates to control subsequent pain and inquietude.

Finish the operation as quickly as is compatible with its proper performance.

Get the patient into a warmed bed as soon as possible, and without any exposure to cold.

Preserve the utmost quiet, and avoid doing too much for the patient until fair reaction has taken place.

By observing these precautions we are confident that in more than one instance recovery has taken place, in which by neglecting them the result would have been fatal.

THE HYGIENE OF THE LYING-IN ROOM.¹

BY FRANCIS MINOT, M. D.

In a valuable paper lately read before this Society, Dr. Reynolds pointed out the advantage of visiting patients previous to their confinement, with the view of obtaining a knowledge of their general health, and of the presence or absence of symptoms which might indicate the possibility of grave complications during and after labor. Among other things he suggested the propriety of making an examination of the urine should there be any reason to suspect renal disease. It has occurred to me that a visit to the apartment in which the woman is to be confined is equally important, in order to ascertain, if possible, its sanitary condition (and also that of the house itself), and to remedy any existing defects which might be prejudicial to her health. I have reported to the Society some cases in which I believe that serious disease, and even death, occurred in the puerperal state from defective sanitary

conditions which might have been obviated if proper precautions had been taken. No surgeon would now undertake a serious operation, such as ovariectomy, without a preliminary survey of the house, as well as of the room in which it was to be performed. Women in the puerperal condition are peculiarly sensitive to the influence of bad drainage and imperfect ventilation, and in modern lying-in hospitals every effort is made to protect patients from these evils. It is somewhat remarkable that so little attention is paid to the hygiene of the lying-in room in private dwellings. It is well known that the drainage and plumbing of a great many houses are defective, allowing a more or less ready access of sewer gas to their interiors, and sometimes giving rise to typhoid fever, diphtheria, scarlatina, and other diseases. It is time that our attention should be awakened to the danger of this poison in the lying-in room. In anticipation of the confinement, it would be wise if an examination of the condition of the drainage and plumbing of the house should be made by an expert in every case in which its integrity had not been already ascertained, in order that any existing defects might be remedied.

The lying-in room should be large, if possible should face the south, and should be provided with an open fire-place which will not smoke. It should not have a "set basin," or other convenience connected with a drain, and it should not communicate by a door with another room containing a water-closet, bath-tub, or set basin; or, if this be inevitable, paper should be pasted over all the edges of the door and key-hole, on both sides, and the door should be kept locked. If a room containing a set basin must be occupied by the patient, it is well to have the waste pipe cut off, and the lower end sealed by the plumber, a pail being placed beneath the basin to receive the waste-water. An examination of the gas-fixtures should also be made to insure against the escape of illuminating gas into the room, a very frequent occurrence, not only in hotels and lodging houses, but also in private dwellings. The wall paper should also be inspected, and tested for arsenic, if need be. The room should be thoroughly swept and cleaned before the period of confinement, and all useless furniture be removed, as well as the numerous ornaments, books, work-baskets, etc., which are apt to encumber the tables and mantel-piece to the inconvenience of the attendants of the patient. Ether and a sufficient supply of a solution of carbolic acid should be provided, as well as an abundance of towels, sheets, etc.

Whenever the weather is so cool that the room is uncomfortable with an open window, a fire should be kept constantly burning in the fire-place during the period of lying-in. The fuel, if possible, should be wood or cannel-coal. Even in warm weather, if the ventilation of the room be not satisfactory, it is well to have a kerosene lamp, or a portable gas jet, connected by a flexible tube with a gas bracket, kept burning in the chimney. Except in very cold weather, a window should always be left open, at least sufficiently to allow some air to enter; in many cases it is enough to raise the lower sash a little, so as to admit a current above it.

Women are usually delivered on a large double bed, which is sometimes so low as to cause much fatigue to the attendants. The patient, especially while under ether, often becomes unmanageable in the middle of it, beyond the reach of the doctor and the nurse. The

¹ Read before the Obstetrical Society of Boston, November 11, 1882.

lying-in bed should be a single one, three and a half feet wide, and the top of the mattress should be two and a half feet from the ground. The patient is then perfectly under control; all necessary obstetrical operations can be performed to the best advantage, and the nurse's duties are rendered much easier. During the whole of the patient's illness she should lie on the same bed, where she can be made far more comfortable than on a larger one, owing to the greater facilities it offers for her toilet. A foot bath-tub, or other vessel, should be provided to receive all soiled napkins, dressings, etc., to be immediately afterwards removed from the room and disinfected. If the catheter be required, the instrument, when not in use, should be kept in a disinfecting solution. No food or article of diet should remain in the sick room, except liquids which are required to be given to the patient at short intervals.

I am aware that in some cases opposition might be raised to the carrying out of the above details, even when their execution would require but little trouble or expense, but I conceive it to be the duty of a physician who is engaged to attend an obstetrical case to suggest their importance, and to point out the danger which experience has shown may follow their neglect.

AN INTERESTING CASE OF FEMORAL HERNIA IN AN AGED PATIENT; STRANGULATION; OPERATION, WITH CURE.¹

BY WM. R. D. BLACKWOOD, M. D.,
Neurologist and Electrician to Presbyterian Hospital, Physician to St. Mary's Hospital.

MR. B., aged seventy-three, tall, thin, but bearing his years well, and with a previous history of good health, was taken ill with supposed cholera morbus on Saturday, August 11, 1883, but from the suppression of alvine dejections shortly after the seizure, and the rapid change of the vomited matter to a manifest stercoraceous fluid by the time his family physician, Dr. John Ivison, saw him, the diagnosis of the family was set aside for one of more grave nature. The gastric distress was very great, the desire to vomit urgent, and the act occurred at short intervals. Previously to his illness the gentleman had been extremely constipated, and the amount of liquid and semi-solid fecal matter rejected per oram was simply inconceivable except to those who saw it. At each instance of vomiting, a fair sized wash-basin was half filled, and the total quantity thrown up before relief ensued was, to speak within bounds, fully three gallons, showing the enormous distention of the intestine which may occur in chronic constipation.

The case was believed to be one of obstruction, with possible invagination of the bowel, and efforts were made toward overcoming the difficulty and obtaining an operation in a normal direction, but without success. The question of strangulation by hernia was not at first accepted, because, although there existed an evident swelling at Poupart's ligament, the size of it was so small as to be taken for an enlarged gland, the patient having had glandular enlargement previously. There was no local pain, no tenderness, no tension, no dragging sensation at the site of the swelling, no tympanites, — in short, the usual local signs of strangulated hernia were absent. The little tumor also was movable

to such an extent as to easily deceive one, even when closely examined. The doctor having asked my opinion as to the condition of the patient, we saw him together, and I coincided with him as to the difficulty in stating positively to the family the evidence of hernial strangulation, but as the patient was rapidly sinking from exhaustion, we decided to make an exploratory incision and determine the nature of the enlargement, the justice of this being explained.

The patient was etherized, and after cutting down to the sac the mass was found to be an entero-epiplocele. The sac contained very little serum, and considering the fact that strangulation had doubtless existed for at least thirty-six hours, the bowel, though highly congested, was in good condition. The gut was tightly nipped at the crural ring and was nearly empty, which accounted for the small size of the tumor. The hernia was internal to the femoral vessels, but closely adherent to them. It was reduced with some difficulty and pushed far up to clear the deep thrust of the needle in closing the wound. The stitches, four in number, were deeply taken and the ring obliterated as nearly as possible. A compress of lint, wet with a mixture of Canada turpentine, oil of sweet almonds, carbolic acid, and glycerine (an excellent dressing), was applied under a spica bandage of the groin, and the patient made comfortable in bed. He reacted well from the operation, vomited freely once thereafter, and in an hour and a half passed an alvine dejection without pain or difficulty. The appetite returned moderately at once, food was well retained, and his strength returned nicely. For forty-eight hours the wound did well, healing for one half its length by first intention, but then inflammatory action set in and free suppuration ensued. In a week, however, the wound had closed, and the old gentleman was able to walk his room with comfort.

The diagnosis of femoral hernia is, at times, not easy, being, as here, liable to be confounded with enlarged glands or localized varix of the saphena. There was no impulse on coughing, no effort at reduction affected it, and excepting only the very small tumor, all the local signs of strangulated gut were absent. The advanced age of the patient was against him, and his depressed vital power was a bad factor. The result shows the value of exploratory operation under the circumstances, and I believe that the attendant is unfaithful to his patient if he does not insist upon it in every suspicious case. The wound is of little account, — it does not enhance the danger which is already imminent, and it may, as here, save a valuable life.

REPORT ON PROGRESS IN SURGERY OF DEFORMITIES AND DISEASES OF JOINTS.

BY E. H. BRADFORD, M. D.

RESECTION OF THE ASTRAGALUS IN ANKLE-JOINT DISEASE.

P. VOGT² advises when resection is indicated in disease of the ankle to begin by excision of the astragalus without removing the malleoli. Two incisions are made, one long anterior, and the other a short lateral cross incision. Langenbeck's method has been the one usually adopted, and consists of bilateral cuts, and a removal of a portion of the tibia and fibula

¹ Read before the Philadelphia County Medical Society, September 19, 1883

² Centralblatt f. Chirurgie, xix., 1883.

for a thorough inspection of the joint. Experience, however, has shown that the astragalus and the neighboring tissues are the parts most involved in the disease both in chronic synovitis with secondary destructive change and in primary osteitis, while the bones of the leg are but slightly affected. Hueter¹ has advised the cross incision recommended by Sedillot and Heyfelder, dividing tendons as well as all soft parts, and thus allowing a full view of the joint. This, of course, divides the tendons and nerves, and, as the writer justly remarks, should be regarded rather as a technical experiment than an accepted procedure. Busch recommends also an incision which should be classed among the surgical curiosities, namely, a cut through the sole from malleolus to malleolus similar to that in Syme's amputation, and a division with the saw through the os calcis, and the opening of the ankle-joint from below.

Vogt proceeds as follows: The skin and soft parts are divided to the bone in a line on the front of the foot extending from the junction of the tibia and fibula to below the line of the medio-tarsal articulation, that is, the line of Chopart's amputation; the tendons, etc., are pushed and drawn aside, the capsule of the joint opened, and the ligaments and periosteum as far as possible pushed aside by means of an elevator, the head and neck of the astragalus laid bare on the upper and outer surface. A lateral cross incision is then made extending to a point below the external malleolus. The ligaments binding the astragalus are divided, and the bone removed by means of bone forceps and chisel or elevator. The whole synovial membrane can be seen, and any diseased portion easily curetted. A drainage tube is then inserted, and the foot placed in position.

LAXITY OF LIGAMENTS OF THE JOINTS IN RICKETS.²

Kassowitz explains this symptom by the supposition that the vascularization of the spongy tissue of rickety bones extends to the perichondrium. Each vessel in the sub-cartilaginous fibrous sheath is surrounded by a zone of embryonic tissue, and the fibrous fasciæ as well are seats of cellular proliferation. The periosteum presents similar changes, and these are most marked at the points of insertion of the capsule and articular ligaments, which, being intimately connected with the periosteum, and also the perichondrium and the bone, are involved in the rachitic process, and lose their power of resistance. Force acting mechanically under these conditions leads to a stretching of these ligaments and a permanent relaxation. This stretching of these ligaments is painful, and Kassowitz is of the opinion that it is this pain rather than muscular weakness which causes the difficulty rachitic children encounter in walking.

THE SECONDARY CHANGES IN MUSCULAR TORTICOLLIS.³

Witzel has had an opportunity to examine by dissection a cadaver in which during life the deformity of wry neck persisted for a long period. The anatomical knowledge on the subject hitherto gained by dissection is small, although anatomists as far back as Tulpus

have interested themselves in the subject, and recorded their observations. Witzel's observations were made with great care, and deserve publicity. The deformity in the case dissected had persisted for forty-four years, and was pronounced in character, and congenital in its origin. The convexity of the skull was somewhat flatter on the right (the elevated) side than on the left, and the same was true of the brain. The cervical vertebræ were found curved, with convexity toward the right, and the trachea was dislocated somewhat toward the concavity. The right sterno-mastoid was a broad, flat band, while the left was a short, round, fibrinous cord, and the symmetrical course of the large vessels normally seen was not found. The spine presented a well-marked scoliosis, with the convexity to the left in the dorsal, and to the right in the lumbar, region, and the pelvis was twisted, the right side being lower and farther back than the left. The cervical vertebræ were found rotated, but the ligaments between the several vertebræ and the head were not changed except that their length and position fitted the position of the head.

The intervertebral substances were thicker on the convex side than on the concave, and this, but to a more marked degree, was true of the articulations. The same asymmetry was found in all the vertebræ, varying as to the distorted side in the different parts of the column. Marked lack of symmetry was to be seen in the skull. This was more marked in the facial bones than at the back of the skull. The middle line of the skull, seen from below, formed a curve, the face being turned to the right relatively to the axis of the rest of the skull. The shape of the face was altered in a characteristic way, the right side being higher and narrower than the left. The lower jaw also was twisted to the left, and slightly backwards.

The distortion of the pelvis was precisely that which is described as characteristic of the rachitic-scoliotic pelvis, except that no evidence of rickets could be seen; that is, the promontory was not pushed forward and the foramina were not flattened, but the right side of the pelvis was lowered and turned to the right, and the lumbar lordosis was more marked than is normal.

The muscles were so gangrenous and œdematous that exact results in comparison could not be obtained. The value of these facts with reference to the theory of muscular traction is pointed out by the writer. Dieffenbach was of the opinion that the distortion of the face always seen in pronounced torticollis resulted from muscular tension. This view has been revived in later times by Albert, but he admits that it does not satisfactorily explain the facts. Bouvier thinks that the altered position of different parts of the body determined a difference in the amount of blood supply in the different sides, and hence a lack of symmetrical growth, and this theory has been accepted by Nélaton, Musson, Guérin, Broca, and most French writers. Little, in Holmes's System of Surgery, vol. iii., p. 591, suggests an explanation, and Busch⁴ is of the same opinion, namely, that the atrophy is due to the interference in the function of certain parts. The explanation which the writer considers on the whole as the most satisfactory is that the tension on the soft tissue in certain parts causes pressure, and in that way hinders development, hence atrophy results.

¹ Deutsche Ges. f. Chir., x. Congress. 1881.

² Vide Revue des Sciences Méd., July 15, 1883, page 297.

³ Deutsche Zeitschrift f. Chir., Band xviii., Heft 5 and 6, page 535.

⁴ Ziemissen's Handbuch, Band ii., 2, page 100. German edition.

ARTHROPHYTES (LOOSE CARTILAGES) OF THE KNEE.

Poncet¹ states his opinion in favor of the belief in a traumatic origin of these bodies, although this opinion is not held by many surgeons. Certain cases cited by Richet, Bachelet, Boeckel, Chipault, and others support a belief in this mode of origin, and Poncet, after a number of experiments on cadavera, thinks there can be no doubt that this is the fact. Microscopical examination proves that there are two forms of traumatic floating bodies of the joint, one femoral or tibial according to their origin, the other, which being of capsular origin, does not contain structurally all the phases of transformation of tissue from fibrous to fibro-cartilaginous, cartilaginous and osseous. The osseous tissue, if it exists in the interior, does not form a central focus, but is a regular band extending to the border of the arthrophyte. A fibrous capsule of new formation may cover the torn osseous surface, but this envelope does not present the stages of evolution seen in the true arthrophyte, which arises from the synovial membrane. M. Poncet advises extraction as the only treatment, and under antiseptic precautions thinks well of the method.

ANGULAR ANCHYLOSIS AT THE HIP-JOINT.

Prof. Stephen Smith² reports a successful operation for the relief of this deformity, in which Shrady's fenestrated saw was used. The advantage claimed for this instrument is that it is impossible for the point to injure deep tissues in the process of sawing. The saw blade works inside of a fenestrated canula, the fenestrum being large enough to allow the saw to cut when moved in and out of the canula. The process is a slower one than that with the ordinary saw. Smith recommends dividing the bone nearly through at two adjacent points,—one on the anterior, and the other on the posterior, surface of the femur; the bone is to be then fractured, and a mortise is thus made which serves the purpose of holding the bone in better position than is the case after complete division of the bone.

PROGRESSIVE OSSIFYING MYOSITIS.

Kümmell³ considers this affection not merely a pathological curiosity, but a well-defined disease, the etiology and nature of which have not yet been thoroughly studied. He reports one case, and has only been able to find in the literature an account of twenty-four others. In the writer's case the trouble appeared to be of congenital origin, as at the time of birth a noticeable deformity of the back was observed, and a limitation of the mobility of the shoulder-joints, and a deformity of great toes. When the child was two years old he suffered from a febrile attack, and there appeared upon the back several tumors, at first soft, but which afterwards became hard. The disease progressed gradually and imperceptibly, not influenced by an attack of scarlet fever, the only sickness the child suffered from, until the twelfth year of his age, when he became noticeably worse. The general nutrition was good; the patient was thoroughly intelligent and well, except in respect to the power of motion. The head of the patient was inclined forwards, and slightly to the right, the humerus could be moved but slightly from the thorax, and the trunk was held in a

stooping position. The head was of normal shape, with rather a prominent forehead, and a protuberance of the size of a hazel-nut was to be seen over the back part of the parietal region. Movements of the head were possible only to a limited degree in a vertical direction or in rotation. Motions of the mouth and tongue, as well as the muscles of the face, were free, but a hard mass connected with the hyoid bone, the thyroid cartilage, and the upper part of the trachea, could be felt. The sterno-cleido-mastoid muscles had degenerated in both portions to a tight fibrous band, and the sterno-hyoid was also to be seen as having undergone a fibrous degeneration. The neck was bent forward, and moved as if it was formed of one solid mass, and a bony projection, apparently slightly movable, could be felt to the left of the fifth cervical spinous process. The thorax was misshapen, the breast bone being prominent, and the pectoral muscles presented several bony masses in the substance of the muscle. The respiration was chiefly abdominal, though the chest expanded 2.5 centimetres at the height of the nipple. Rotation of the humerus in the socket was free, but motion in the direction of abduction or forwards and backwards is limited by bony growth around the joint. A bony protuberance of the size of a hen's egg was to be felt in the left axilla. The abdominal muscles were normal, but on deep narcosis the psoas muscles could be felt as converted into a tough, hard mass. The back was twisted so as to present a scoliosis with the lumbar convexity to the left; several large bony masses were found prominent in the back; some apparently outgrowths from the spinous processes, and some in the belly of muscles. The scapulæ are only slightly movable. The thighs were slightly flexed, and at the upper insertion of the biceps was a hard tumor apparently not bony. The slight contraction of the knees was present, but both that and the flexion of the thighs were corrected by extension. A portion of the bony growth around the shoulder was removed under antiseptic precautions, giving an increase of the amount of motion in the direction of abduction. The faradic electrical reaction of all the affected muscles was found diminished.

Partsch⁴ reports a similar case, that of a boy seventeen years of age, in which the clinical course of the affection was somewhat different. The first symptom dated from a fall when the patient was seven years of age, and which bruised the shoulder, causing a swelling, which eventually developed into a hard, bony mass; a stiffness in the muscles of the fore-arm on the other side followed, and three years later a tumor of the forehead subsequent to a bruise. The left masseter became stiff, undergoing osseous degeneration after an alveolar abscess, so that opening of the mouth became possible only to a limited degree. Other complications gradually appeared, such as exostoses of and bony formations in the scaleni, left clavicle, ankylosis of the different vertebræ. The lower extremities were nearly normal with the exception of a few exostoses in the region of the hip, but the arms were rather more useless. The thumbs and great toes exhibited congenital deformities.

Pathologically the process begins with a simple infiltration of intermuscular tissue, sometimes with the symptoms of pseudo-fluctuation; this stage is followed by a fibrinous induration, that is, a cellular hyperplasia with subsequent shrinkage of the muscle; finally os-

¹ Rev. de Chir., October, 1882.

² New York Medical Record, June 2, 1883, page 589.

³ Archiv f. klin. Chir., Band xxix., Heft 3, 1883.

⁴ Centralblatt f. Chirurgie, 10, 1883.

sification takes place. This latter occurs after initial œdema has subsided. The writer verified the fact by the microscopical examination of a portion removed from a patient that the change was not a calcification simply of the muscle, but the formation of true bony tissue, accompanied by covering cartilage in places. Virchow has named the morbid process an ossific diathesis, and considers it a hereditary or congenital predisposition. Münchmeyer, considering it inflammatory, calls it progressive myositis ossificans. Some of the tumors are true exostoses, and connected with some part of the skeleton, looking like bony stalactites, but other tumors are purely transformations of connective tissue.

The disease may progress usually symmetrically until almost all the muscles of the body are involved, beginning in the vertebra or the muscles of the back. Sometimes an unusual form of congenital symmetrical deformity of the toes and fingers appears. Progress is made by progressive attacks occurring at long intervals. Treatment by baths, mercurials, iodide of potash, seemed to give only temporary benefit. The extirpation of such portions of bone as limited motion was not attended (in the case where it was attempted) by unfavorable results.

REFORMATION OF THE HEAD OF THE FEMUR AFTER EXCISION.¹

Küster reports two specimens obtained after excision of the hip from cases where he repeated the excision of the bone several months after the original operation. In the first instance the medulla cavity was not found closed in by bony formation, but in the second the appearance was very similar to that found in a diseased head of the femur. An apparent head and a partially formed trochanter were to be seen. The medullary canal was covered by a thin shell of bone.

Israel has published a case where the autopsy was made three and a half years after the operation of excision of the hip. The result had been a satisfactory one both as regards usefulness of the limb and mobility, and the examination showed that the normal type was reproduced, and that the thigh was united to the pelvis by a species of capsule. Histologically the cartilage was peripherally fibro-cartilage, but the nearer the bone the more it resembled true hyaline cartilage.

EXPERIENCE WITH PLASTER JACKETS.²

What has been termed the "plaster-jacket craze" has so far expended itself that there is danger that the advantages of the method be overlooked. The discussion in Berlin relative to the method is therefore of interest. Sonnenburg reports his experience in 205 cases (of which, however, only twenty-two were antero-posterior curves, the rest being lateral curvature). The jackets were applied on patients, were suspended from the head, but not the axillæ, the shoulders being free. The bandages were put on with moderate tightness forward and back, and pressure was made on the moist plaster by the hands of assistants. A renewal of the jacket was made in about six weeks, and after a while a leather corset was substituted, and gymnastics (in lateral curvature) employed. The reporter found correction of the curves to take place under light suspension in moderately severe and even

in some marked cases, and in the very obstinate curves some benefit appeared to be gained in the arrest of the progress of the disease. Felt and leather corsets in progressing disease Sonnenburg did not advise in early stages. Küster also found jackets of service in lateral curvature, and of use in caries, in which Sonnenburg did not agree with him. Eulenberg, on theoretical grounds, is opposed to the use of the plaster dressing with suspension in caries of the spine.

THREE CASES OF JOINT-NEUROSIS.³

Lehman alludes to the scarcity of the literature on the subject. Wernher⁴ claimed a distinctly inflammatory origin of the nervous symptoms, and that suppuration could follow in the cases of so-called "nervous" coxalgia, but Esmarch in his Monograph,⁵ as well as the earlier writers, Stromeier, Brodie, and Barwell, believe in the true nervous nature of the symptoms. The disease is not a common one, Esmarch being able to collect only eighty cases recorded in the literature, and furthermore the variety of symptoms which may be classed under the head of this disease is so great as to make the diagnosis difficult. Lehmann mentions that a beginning neurosis can easily be mistaken for a commencing inflammatory process, especially when other nervous symptoms are present than those manifested locally, and when, as is sometimes the case, the limb is held fixed in an abnormal position. The clinical history of the case, the absence of evidence of alteration in the shape of the joint, and the intensity of the nervous symptoms often guide in diagnosis. The treatment in Lehman's cases consisted of gradual correction of distortion by moderate continued extension, and later systematic attempts at walking, Arsenic internally in one case was of possible benefit.

CASE OF PECULIAR ALTERATION OF THE SHOULDER-JOINT IN INFANTILE SYPHILIS.⁶

Troisier reports the following unusual clinical history, which, before death, was considered as an instance of syphilitic pseudo-paralysis, described by Parrot: A child, seven weeks old, was brought to the hospital with evidence of hereditary syphilis and a congenital hare-lip, which was operated on successfully when the child was twelve weeks old. The patient could not move the left arm, and if lifted, the arm would fall as an inert mass, but voluntary motion of the fingers and slight contraction of the biceps were possible. After death it was found that there was no alteration in the joint proper, but the epiphyseal cartilage was separated from the diaphysis by a layer resembling thickened pus, and on traction the epiphyses could be completely pulled away from the diaphyses in the femora. Several of the bones gave evidence of gelatiniform atrophy.

TREATMENT OF LATERAL CURVATURE WITHOUT APPLIANCES.⁷

Bernard, Roth, of London, an advocate of this method of treatment, describes the principles of treatment as follows: If the slightest osseous deformity be present, complete restoration to normal shape is impossible, but even severe cases of lateral curvature exist without

¹ Archiv f. klin. Chir., Band xix., Heft 2, page 409-411.

² Vide Centralblatt f. Chirurgie, No. 18, 1883.

³ Berl. klin. Wochenschr., No. 17, 1883, page 251.

⁴ Deutsche Zeit.-chr. f. Chir., 1872.

⁵ Ueber Geleuk neurosen., Kiel, 1872.

⁶ Progres Medical, May 12, 1883, page 361.

⁷ British Medical Journal, April 21, 1883, page 773.

osseous deformity, and are capable of being temporarily restored to a normal position. A patient, however, with confirmed distortion, with or without osseous deformity, may have become so habituated to vicious positions that voluntary attempts at correction on his part rather increase than correct the deformity unless directed by the surgeon, and exercises of the spinal muscles are absolutely necessary for complete recovery; good positions should be assumed at all times, in sitting, by means of suitable chairs; moderate walking is beneficial, lying prone or supine is not curative; spinal supports, when the patient can by his own efforts assume a normal position, are useless or injurious; swinging by the head does not strengthen the spinal muscles. By avoiding all vicious positions, by good ones being shown and maintained, and suitable exercises carefully practiced, better and quicker results can be obtained than by any other method.

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— An outbreak of epidemic nervous disorder among the girls at a religious school in Brittany is reported. Thirty-five out of fifty girls were attacked by a choreic disorder, and the school was ordered to be closed by the local authorities.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

PROPOSED CHANGES IN THE CONSTITUTION AND BY-LAWS.

HOSTILITIES in the "code war" were resumed with great activity in the Academy of Medicine at the first meeting after the summer vacation, which was held Thursday evening, October 4th. Previously to the meeting the President, Dr. Fordyce Barker, had sent to all the Fellows of the Academy a circular, in the course of which he says, "The question now to meet is, What measures can be taken to secure for the Academy a return of its prosperity? by which I mean a restoration of its fraternal harmony and good fellowship, a renewal of its active scientific work, and an increase of its funds for the growth of its library and the adequate support of its journal department. . . . It must be obvious to all that to attain this end we must make a new departure on certain questions, to which it is unnecessary to refer more definitely. There is an 'irrepressible conflict' of views and opinions, which cannot be settled by parliamentary tactics or a majority of votes, but must continue until in the progress of time the moral sentiment of the profession is crystallized in a public opinion which will have the force of law. No possible good can come from profitless and irritating discussions of these questions in the Academy of Medicine. It therefore seems to me of vital importance that now, in making a new departure, everything in relation to them should be buried in the past and forgotten. The next point to be secured is by such a change in our organic laws as to make it impossible that trouble and danger can ever occur again in the Academy. At our first meeting in October certain amendments to the Constitution and By-laws will be proposed for discussion, and at the following meeting they will be submitted to the vote of the Academy."

The proposed amendments involve the following changes: In the Constitution the existence of the committees on Medical Ethics and Medical Education is discontinued, and the following is substituted for the present Article VIII.: "The Academy reserves the right of discipline by admonition, suspension, or expulsion, by which all rights and privileges as a Fellow are forfeited, for violation of its By-laws or regulations, for unprofessional, ungentlemanly, or dishonorable conduct, and for public immorality and great crimes." This article now reads, "The Academy reserves the right of punishing violations of its regulations, or of its code of medical ethics, by reprimand, suspension, or expulsion, and will recognize no Fellow as a regular practitioner who has been expelled." Among the changes in the By-laws are certain modifications of those referring to the duties of the Council and the Committee on Admissions, and the total abolition of those referring to the committees on Ethics and Medical Education. In the former of these By-laws two of the sections read as follows: "Section 3. It shall be deemed a chargeable offense to countenance, encourage, or patronize — by advertising, giving certificates, or in any other way whatever — an irregular practitioner, or the proprietor or vender of any nostrum, patent or quack medicine, or to commit any act which unfavorably affects the character of the medical profession."

"Section 5. All questions of ethics in other respects shall, as far as applicable, be adjudged in accordance with the Code of Ethics promulgated by the American Medical Association, and adopted by the Academy."

In opposition to Dr. Barker's circular the following was issued by the Council of the Organization for Upholding the National Code of Ethics: "The Council of the Organization for Upholding the National Code of Ethics in the State of New York begs to call your attention to a circular recently issued, in which are proposed certain amendments to the Constitution and By-laws of the New York Academy of Medicine. The Council cannot but regret the issuing of this circular as a covert movement, under a plea for harmony, in behalf of the organized effort in opposition to the National Code of Ethics. The proposed amendments, were they adopted, would eliminate from the Constitution and By-laws everything relating to ethics, and surrender the Academy to those who advocate the abolition of all ethical codes. The Academy would thereby be deprived of the right of representation in the American Medical Association, and of affiliation with other medical organizations out of the State of New York. It may be assumed that there is no disposition on the part of those who are for upholding the National Code of Ethics to raise any discussion respecting the Code in the Academy. The Code has never been made a subject of discussion in the Academy by any one in favor of upholding it, and there is no ground for the supposition that it ever will be unless it becomes necessary in the way of defense. The resolutions presented and adopted at the last meeting of the Academy had for their object the prevention of any future discussion relating to the Code. Every true friend of the Academy is earnestly requested to attend its meetings in order to resist the introduction of discussions and controversies in relation to ethics by simply maintaining in their integrity the time-honored Constitution and By-laws of this institution, to which it owes its origin and prosperity." Signed, Abram Du Bois, Austin Flint, Austin Flint, Jr., J. W. S. Gouley, John H. Hinton, Samuel T. Hubbard, William T. Lusk, Samuel S. Purple, and T. Gaillard Thomas, *Council*.

There was an immense attendance at the meeting of the Academy, in regard to which two notices had been issued. The first announced that the proposed amendments would be moved by Drs. T. Gaillard Thomas and William Detmold; but both these gentlemen, whose names had been used without proper authorization, having declined to serve in this capacity, an "amended notice" became necessary. This gave the names of Dr. Edward L. Keyes as mover, and Dr. A. L. Loomis as seconder, of the amendments. After the reading of the minutes, the secretary read the following communication for the Council of the Academy:—

NEW YORK ACADEMY OF MEDICINE, {
No. 12 West Thirty-first Street,
NEW YORK, October 4, 1883.

At a special meeting of the Council of the New York Academy of Medicine, held Monday evening, October 1st, 1883, it was

Resolved, That the Council advise, in the interests of the Academy and of peace and harmony, that the proposed amendments be withdrawn.

Resolved, That the Council, after careful and mature consideration, do not approve of the proposed amendments to the Constitution and By-laws.

DR. KEYES, in accordance with the programme, moved the adoption of the amendments as a whole, and made some remarks, in the course of which he stated that he firmly believed that by their adoption the Academy could secure an easy path of escape from the difficulties which now surrounded it.

The Secretary then read the amendments, and in seconding the motion for their adoption Dr. LOOMIS remarked that he would urge this course, first, on the ground of expediency; secondly, because this was not the place for discussions in regard to medical codes; and, thirdly, in order to save the Academy from degeneracy, and perhaps from destruction.

DR. AUSTIN FLINT, JR., moved that the amendments take the regular course, and after some remarks by Dr. HENRY, who was called to order by the chair, on the ground that such a motion was not debatable, Dr. C. C. LEE moved to amend the motion to postpone by going into committee of the whole to consider the amendments. Dr. FLINT claimed that such an amendment was not permissible; but the chair having decided that it was, the motion to go into committee of the whole was put to vote and carried. The President appointed Dr. Elsworth Eliot chairman, and Dr. Wesley M. Carpenter was elected secretary of the committee.

DR. ROOSA said he hoped that the President would give some expression of his motives and ideas, and accordingly Dr. BARKER made some extended remarks, very much in the strain of the circular which he had issued. In concluding he took up the proposed amendments one by one, and stated what they were designed to accomplish.

When he had finished Dr. FLINT, JR., took the floor and said that before the meeting every member of the Academy knew what these amendments meant. One of them provided for the extinction of the Committee on Ethics and everything connected with it. This left the Academy without a code of ethics, and of course necessitated certain changes in the Constitution and By-laws as they now existed. This was all there was about the matter. It was not of the slightest consequence what the committee of the whole had to say on the subject; but when the amendments came up for action at the next meeting all those in favor of the old Code would vote against their adoption, and all those in favor of the new Code would vote for it. It required a three-fourths vote to adopt them, and their passage, he believed, was absolutely hopeless. Consequently, he believed that the proposal of the amendments was a fire-brand, which could only have the effect of increasing the unpleasant feeling which now existed in the Academy. The question of their adoption could not come up to-night, and he certainly did not want to discuss them any more. He hoped that no friend of the National Code would say one word about them; the only way was to come to the next meeting and vote against them. Before taking his seat Dr. Flint said that he would not have spoken at all if the President had not overruled him, and decided that the amendment to go into committee of the whole was in order.

On motion of Dr. BARKER, the following resolution, which was a modification of a similar one previously presented by Dr. Elsberg, was passed:—

Resolved, That in the opinion of the committee of the whole it is advisable to adopt the amendments to the Constitution and By-laws, and that the chairman be instructed to report this to the Academy.

A motion that the committee of the whole rise, report progress, and ask leave to sit again at the next meeting of the Academy was carried, and the chairman made his report. Dr. Flint's original motion that the amendments take the regular course and lie over until the next meeting was then adopted, and the Academy adjourned.

MASSACHUSETTS MEDICO-LEGAL SOCIETY.

W. H. TAYLOR, M. D., RECORDING SECRETARY.

OCTOBER 3, 1883. Stated meeting at the hall of the Boston Medical Library Association, President PRESBERRY in the chair. Present, sixteen members. The meeting was called to order at twelve o'clock, M. Records of the last meeting were read and approved.

NEW MEMBERS.

On recommendation of the Executive Board, Medical Examiners J. P. Lynde of Athol, Christopher Seymour of Northampton, F. L. Burden of North Attleborough, O. J. Brown of North Adams, and G. P. Pratt of Cohasset were unanimously elected members of the Society.

PUBLICATION OF THE TRANSACTIONS.

On motion of Medical Examiner DRAPER, *voted*: that the Standing Committee be authorized to print and publish, at the expense of the Society, an edition not exceeding three hundred copies of the Transactions for the current year; and that the edition be distributed by the Treasurer as follows: To each regular member who has paid all his assessments to date, three copies. To each contributor to the pamphlet published, ten copies. To each associate member, one copy. To each of fifteen periodicals, one copy. The balance of the edition shall be held for sale to members at cost price; to all others at the best rates which the Treasurer can arrange.

PURCHASE AND CIRCULATION OF MEDICO-LEGAL JOURNALS AND BOOKS.

Also on motion of Medical Examiner DRAPER, *voted*: that the Treasurer be instructed to expend annually before the first day of January, until further orders, from the unappropriated funds in his hands a sum not exceeding twenty dollars for journals, books, or both, devoted to legal medicine, to be circulated among such of the regular members of the Society as have paid all their assessment dues to the date on which the book or journal leaves the office of the Treasurer; the books and journals being finally deposited as the property of the Society, with the Boston Medical Library Association. *Voted*: to allow each member the use of each journal or book so purchased for three days and to follow the most convenient method, geographically, in their circulation, the execution of the plans to be left with a committee composed of the Treasurer and Medical Examiner Draper.

Theodore M. Osborn, Esq., of Peabody, was nominated for associate membership.

Medical Examiner TAYLOR read the notes of a case of delayed putrefaction, which were discussed by Medical Examiner Draper.

The President acknowledged the receipt of the *New York Medico Legal Journal*, No. 2, and the Transactions of the Philadelphia College of Physicians, Series 3, No. 6.

Recent Literature.

A Compend of Surgery for Students and Physicians. By ORVILLE HORWITZ, B. S., M. D. Philadelphia: P. Blakiston Son & Co. 1883.

A more superficial little book can hardly be imagined. To the practitioner it is useless, for it contains but a portion of the information which every physician should have at his fingers' ends, and would never solve for him a question of doubt. For the student it is a dangerous guide, as it is wanting in the detail so necessary to a beginner. The author trusts "that it will supply a want that is supposed to exist." The only want that one can conceive to be supplied by it is that of a student who at an examination wishes the aid of a very weak-kneed pony.

The Roller Bandage. By WILLIAM BARTON HOPKINS, M. D. Philadelphia: J. B. Lippincott & Co. 1883.

Dr. Hopkins has succeeded, with the aid of numerous accurate and artistic illustrations, in giving a good and graphic idea of the more common applications of the roller bandage. Many of the plates, however, notably the last one in the book, depict bandages applied with a want of neatness which would inspire horror in the mind of a careful dresser.

The author's object has been to show the methods of adapting bandages to different parts of the body rather than their uses in fixing apparatus, and in this limited field he has met with a fair degree of success.

Transactions of the Medical Society of the State of Pennsylvania, at its Thirty-Fourth Annual Session, held at Norristown, May 9, 10, 11, 1883. Volume xv. Published by the Society. 1883.

This volume of over five hundred pages contains, in addition to the papers read at the annual meeting, the reports of the various county societies, some seventeen in number, and shows them, as well as the State Society, to be in a flourishing condition, which is also evidenced by the generally high standard of the professional work represented by the papers. Among the contributors we notice several names well known throughout the country. Many of the articles have already appeared in the Philadelphia and other journals, and this substantial volume affords a permanent way of preserving them.

Quiz Compend of Viscera: A Compend of Visceral Anatomy, especially adapted to the use of Medical Students. By SAMUEL O. L. POTTER, M. A., M. D., A. A. Surgeon, U. S. Army. Philadelphia: P. Blakiston, Son, & Co. 1883.

This, as its title implies, is an interrogative compend on the viscera. It embraces minute as well as coarse anatomy. The former strikes us as particularly unsatisfactory. There are forty-one wood cuts of little merit.

Medical and Surgical Journal.

THURSDAY, OCTOBER 4, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

PRESCRIPTION WRITING.

JUST at the commencement of the academic year a few remarks on this branch of medical study may not be out of place. The student is apt nowadays to felicitate himself that polypharmacy is a thing of the past, and he is generally impregnated with the idea (not founded altogether upon fancy) that when he has learned to understand the action of a few drugs, and to express skepticism with regard to the rest, he has fulfilled the therapeutical requirements for a scientific practitioner. He is, in fact, apt, unless of an extremely practical turn of mind, to neglect treatment altogether while threading the mazes of pathological anatomy and scientific diagnosis. Now while we have every reason to congratulate ourselves that the broader and more fundamental studies occupy the greater part of the student's time, there is, we think, danger of his going too far in neglecting altogether to acquire the technique of medical practice.

The old method of study under a single physician, with all its shortcomings, had certain advantages. Although the diagnoses made at the clinical exercises were often of the variety called "snap," the student did gain some valuable points for future use which in the more scientific study at the school and hospital must of necessity be left in the background. He learned, if he used his powers of observation and reflection, what to say to the private patient and what to say to the family, and, better yet, how to keep silence where silence is golden; he learned how to comport himself in practice towards his brother practitioners; and amongst other things he learned how to write a prescription for each indication he was likely to meet. He did this because he learned that whatever the case this is the one thing which the doctor is generally called on to do. Many a graduate of our schools when he opens his office finds his ideas on these practical subjects rather vague, and while thoroughly versed in the diagnosis of diseases he may be quite at sea when first required to render a bill, to send a patient to the asylum, or to call another physician into consultation. Indeed, he will be fortunate if some awkward technical blunder does not interfere materially with his opportunities to exercise his skill in diagnosis. Most of the technicalities of practice will be learned *with* the practice, aided, perhaps, by a not too careful study of *some* of the suggestions of such an adviser as "The Physician Himself, and what

he Should Add to his Scientific Acquirements;" but every young practitioner would find it extremely convenient to be able at the outset to write a prescription to meet any ordinary requirement.

We would by no means place this branch of medical study in the very foreground; indeed, the advantage of a scientific medical education lies in the fact that the student, instead of picking up a practical point here and there, learns to develop a systematic plan of analyzing phenomena which forms a basis for all future work, and which will enable him to place his conclusions far above the plane of shrewd guessing. Still the student must never lose sight of the fact that individual practical points will also prove useful, and that the accumulation of these points depends as much upon his own exertions as upon those of the medical faculty.

The danger of forgetting the importance of *treating* disease did not exist under the old *régime*. The pupil, brought face to face with actual practice, sharing in a certain way his teacher's responsibility, and called sometimes to take his place, was inclined by force of circumstances rather to fall into the opposite error of learning to treat without learning to diagnose. He could "write for a cathartic, an expectorant, a diaphoretic, an emmenagogue" before the end of his first year; a task which, it is to be feared, proves a stumbling block to many an aspirant for the medical honors of some of our best schools, and which furnishes every year melancholy amusement for the professor of therapeutics. This by no means shows faulty instruction in therapeutics and materia medica, for this very student knows really far more of the properties and the physiological and medicinal action of the drugs for which he cannot write than his country cousin. The misfortune rather than fault lies in the fact that the Harvard student, for example, has not yet had practically brought home to him the fact that one of the tasks he will be called on to perform in his practice, is to write prescriptions, and this not under the comparatively lenient eye of the instructor, but before the unrelenting gaze of the patient, who is to pay him for doing it, and who is trying to decide whether he has come to the right doctor.

In each of the principal clinics of Germany is published a hand-book of pocket dimensions, which contains the favorite prescriptions there in use. In the Vienna hand-book the various diseases are arranged alphabetically, so that under each disease is found first the general principles of its treatment, such as "rest in bed," "water dressings," "ice," "clearing the bowels," etc., then a list of the prescriptions which may prove useful; the prescriptions, while generally characterized by great simplicity, being all written out in full form. By the study of such a book in connection with each disease the student in Germany endeavors to supplement his peculiarly scientific course. Some such plan might not be amiss for the American student. It may be objected that he would learn to depend upon the book; but this is not an objection of much weight, for he will not care to pull out his book often at the bedside, and even if he does depend upon

n the case of my venerated friend, the "older practitioner," it is clear that his "moral and ethical duties" sanctioned the habit which had governed his practice in respect to the management of such monsters as were delivered at his hands.

WILLIAM C. WEY, M. D.

ELMIRA, N. Y., September 29, 1883.

IODOFORM IN FISSURE OF THE ANUS.

MR. EDITOR, — Following the advice of Dr. Thomas Hay (as quoted in the *JOURNAL* of August 30th last, page 211), I recently ordered some suppositories, each containing two grains of iodoform, for a lady, who has been greatly plagued by fissure of the anus for three or four years, but who has emphatically objected either to incision or forcible dilatation of the sphincter; one to be inserted morning and evening, after movement of the bowels.

I saw her upon the second day, and she expressed herself as much pleased. The sphincter was so relaxed as to permit more copious evacuation, and there was none of the usually resulting pain and burning.

I saw her again on the sixth day, when she was suffering from intense headache; and was told that on the fourth and fifth days she had been annoyed by an almost irresistible desire to sleep, and an excessively bitter taste in the mouth, which still continued, in spite of the very severe pain in the head. Upon inquiry I found that, not fully carrying out my directions, she had only used eight of the suppositories — or only sixteen grains — in the six days. But the toxic effects of iodoform were unmistakable. She is now, three days later, quite recovered, after much sleep and a gentle aperient. But I think it right to record the case, as a caution to other physicians who may employ this remedy. My patient may be unusually sensitive to its action; but others may be as much, or more so. And, in any case, it should be carefully watched.

Very truly yours,

ALEXANDER R. BEEKER, M. D.

BERKELEY, CALIFORNIA, September 28, 1883.

MALARIA.

MR. EDITOR, — In your issue of August 30th is a review of a recent paper by Dr. C. P. Russell, of New York, on the nature of the malarial poison, and its conditioning influences.

The views held by Dr. Russell are not new, nor are they entirely original, for eight years ago I heard almost the same ideas advanced by the late Dr. George A. Ward, of Peru. Dr. Ward's experience through the mountainous regions and on the sandy plains of Peru was great, having extended over a period of about twenty years, and the large number of malarial cases he encountered throughout the country (chiefly intermittent and bilious remittent in form) soon convinced him that heat and moisture, in conjunction with an organic pabulum, did not always evolve the malarial type. Indeed, I think he stated in the *New York Medical Record*, a short time before his death, — which took place rather suddenly from a violent malarial fever, contracted at an elevation of over seven thousand feet, in a district

almost destitute of vegetation or water, — that though he did not pretend to a knowledge of the real nature of malaria, he firmly believed that neither heat, moisture, nor organic matter played any part in its evolution.

I have seen intermittent and remittent fevers as prevalent on the dry, sandy plains and through the mountains, even up to the snow line, of Peru as I have ever seen them in Panama.

During the construction of the Oroyo railway from Lima to its present terminus, fifteen miles from the summit of the Cordilleras, a violent malarial fever broke out as soon as the ground was disturbed, which carried off several thousands of workmen. This fever raged chiefly along the rainless portions of the road, that is, the lower two thirds, where the earth is always exceedingly dry and the soil thin, though it extended to an elevation of thirteen thousand feet, or nearly to the snow level. A description of this epidemic, under the title of Oroyo Fever, was published some years ago by Medical Director Browne, of the Navy, and Dr. Ward, who was a surgeon on the road at the time.

Two years ago a detachment of troops from the Chilean army of occupation in Peru was sent up the Oroyo railway and across the Cordilleras; but no sooner had they reached the snow line than a malignant malarial fever much resembling the Oroyo appeared among them, and fairly decimated the force. At the present time the Chilean troops quartered on the dry plains are suffering heavily from various forms of malarial fevers, though one not acquainted with the peculiarities of the country would pronounce their atmospheric and telluric surroundings unqualifiedly good.

Yours truly,

A. C. HEFFENGER, M. D.,

Passed Assistant Surgeon, U. S. Navy.

Miscellany.

THE CLIMATE OF SANTA BARBARA AND THE NORTHERN PACIFIC COAST.

AN English writer in the *Lancet* (August 25th) thus describes the climate of Santa Barbara and some other localities of the Pacific coast: At the former place the average annual rainfall is not more than sixteen or seventeen inches, and it comes chiefly in November, December, January, and February. All through the winter months roses, geraniums, verbenas, etc., flourish and bloom in the open air and without shelter, while strawberries ripen up till December, the grape ripens freely in the open, and the orange, the lemon, the Japanese persimmon, and the olive are seen in full fruit in January. The summers are dry, but not very hot, the thermometer very rarely rising to 90° F. The average temperature for July is 68° F., and that for January 53° F., giving a difference of only 15° F. Snow never falls, and even slight frosts are rare. The nights are cool all the year through, but never very cold, the average difference between the warmest part of the day and the coolest part of the night being reckoned 12° F. The winter months average 54° F., the spring 60° F., the summer 68° F., and the autumn 63° F. In his statistics of temperature and the climate of the Riviera, Dr. H. Hassall gives in round numbers the following: Winter 55° F., spring, 50° F., summer 63° F., and autumn 72° F., the average for the year being a little over 60° F. These figures apply chiefly

to San Remo, the numbers given for Bordighera and Mentone being a little higher, and those for Nice a little lower. At the outset I alluded to the advantages of those climates that permitted the greatest number of hours to be spent in the open air. The following computation was made by a patient staying at Santa Barbara. During the year (February 1st to January 31st) there were three hundred and ten pleasant days, when an invalid might be out five or six hours with safety and comfort; ten windy days and five wet ones, when he would be kept in-doors all day; the remainder cloudy and showery days, on which he could be out part of the day with comfort. A feature of open-air life that has been largely tried, and with the best results, at Santa Barbara, is camping out. Patients living there get into the habit of being so much out of doors that the transition to camp life is easy, and has been by some carried on for four or five months continuously. In California horses are plentiful, and everybody rides. The "vaquero" spends his life in the saddle. Mere children are seen mounted on a good-sized mustang, which they manage with the ease of perfect horsemanship. Visitors buy or hire horses for the season, and the invalid, too, enjoys his morning ride. As the place has grown, so pleasant society has increased, while good shops, a club, and good hotels have rapidly sprung up.

Los Angeles, which I have already mentioned, lies a little off the coast, about a hundred miles southeast, and has a climate rather warmer and drier than Santa Barbara. It is a town of considerable size, and is the centre of a large orange-growing and wine-making district. A hundred and twenty miles further south lies San Diego, with an annual mean temperature of 62° F., and a rainfall rather under eleven inches. Going northwards from Santa Barbara we have Monterey, a favorite resort with the people of San Francisco, from which it is distant a little over a hundred miles, and is prettily situated on a bay opposite to Santa Cruz. At certain seasons San Francisco is much exposed to cold winds off the sea, and to escape these people betake themselves to Monterey, with its cedars and cypresses, and its sheltered situation. In December the climate of San Francisco was delightful, far more pleasant than in September, being moderately warm and equable. In summer the early part of the day was often very hot, but towards noon a cold wind would sweep inwards off the sea with chilling and penetrating force. Passing to the northward of San Francisco we have, in Western Oregon and in Washington Territory, a lower temperature and a long wet winter, with a rainfall of as much as forty-five inches or more. This district lies to the west of the Cascade range of mountains, and extends as far north as Puget Sound. Immediately to the north of this are the Straits of San Juan de Fuca, separating British from American territory. On the northern shores of the straits, at the southeast corner of Vancouver Island, the town of Victoria, capital of British Columbia, is picturesquely situated.

It is surprising, at first sight at least, to find, nearly a thousand miles north of San Francisco, a climate closely resembling that of the English south coast, having a winter average temperature of 42° F., and a summer of a little over 60° F. This mildness, which extends more than three hundred miles north of Victoria, is attributed to a warm stream called the Japanese current, which strikes the Queen Charlotte Islands and flows southerly along the shores of Vancouver

Island. Victoria bids fair to become a favorite winter residence and sanitarium on account of the beauty of its surroundings and the equability of the climate.

THE SURGERY OF THE LUNGS.

THE *Medical Times and Gazette* reproduces a paper by Dr. Bull, of Christiania, communicated to the *Nordiskt Medicinskt Archiv*, containing a case bearing on the question of operative proceedings in diseases of the lungs. The author also gives a brief review of the literature relating to the operations hitherto performed in diseases of the lungs, together with some observations on the indications connected with the opening of tuberculous cavities, and he draws attention to some new possibilities of limited expiratory expansion of the pectoral wall. The case was that of a man, twenty-nine years old, who entered the State Hospital of Christiania, exhibiting all the signs of advanced pulmonary tuberculosis, such as hectic fever, violent cough, abundant muco-purulent expectoration, emaciation, and anæmia. In the first, and partly in the second, left intercostal space, external to the left sternal border, there was observed during the fits of coughing a considerable and clearly limited expansion of the pectoral coverings, which circumstance was not observed in tranquil breathing. This limited expiratory expansion was thought to be due to a superficial cavity adherent to the thorax and, perhaps, ulcerated by the pleural adhesion. Viewing the possibility of the suspected cavity offering an advanced process of ulceration; and of the secretion, incompletely expectorated, flowing into the neighboring bronchi; considering that the fever and the cough were partly relieved by the opening of the cavity externally by means of drainage and disinfection, and that the expiratory expansion in front might perhaps indicate a commencing perforation of the thoracic wall; taking all these matters into consideration it was determined, with the consent of the patient, to try the operation. This was accordingly performed, and after the perforation of the thoracic wall the finger could be introduced into a small empty cavity, limited on all sides by smooth walls, the base of which was formed by a solid elastic tissue. There was no sound of air entering or going out. The day after the operation, during a fit of coughing, there was a sudden discharge by the wound of a liquid like that of expectoration, and this discharge continued abundant, but without relief to the patient, who died in six days.

On post-mortem examination the left lung was found to be separated almost entirely by from three to four centimetres from the thoracic wall, and there were only a few filiform adhesions with the upper parts. There was fibrinous pleurisy and a little pus in the pleural cavity. At the apex of the lung there was a large superficial cavity. In other respects in both the lungs there were the usual indications of phthisis. The differential diagnosis between a cavity and a pneumothorax in cases such as the above cannot be made with certainty, and, in view of the possibility of mistake, Dr. Bull advises that pulmonary operations should always be performed with the aid of antiseptics, so that if the incision reveals a pneumothorax the wound may then be closed and the operation be regarded only as "diagnostic." Dr. Bull has found in medical literature the records of nineteen cases in which the opening of

pulmonary cavities has been undertaken. Five of these, however, are imperfectly reported, or the diagnosis was too doubtful to be of any service. Of the rest of the cases, two were instances of bronchiectatic cavities, in one case the bronchiectatic cavity was consecutive to pneumonia, five were cases of pulmonary abscess, three of pulmonary gangrene, two of tuberculosis, and one of echinococcus of the lung. The results of the operations were as follows, namely: Cases perfectly cured, two; very marked improvement, two; more or less relief, seven; no ill consequences, one; cases made worse, two. As to the tuberculous cavities, experience is almost entirely wanting as to the effect of artificial pulmonary fistulae, and it belongs to the future to demonstrate whether an operation of this kind is more dangerous in phthisical patients; but even when this proceeding might appear to be without danger, it should not be performed at a too advanced period of the disease.

PARTURITION AMONG THE MAORIES.

IN connection with the articles that have appeared in various periodicals within the past year or two regarding labor among primitive and barbarous peoples, we make the following extracts from a letter in the *Australasian Medical Gazette* (May, 1883), from a practitioner who has had abundant opportunity to witness the customs in that regard among the Maories. The women are as a rule very well formed, and in ordinary labors they manage things admirably, only calling in a white doctor when there is great delay, or when from other causes they become frightened. The writer says:—

The Maori *modus operandi* during labor is as follows: When the woman is taken in labor, she, with one or two of the same sex, goes into the titree, or manuka scrub, some two hundred yards or so from the whare, and if the weather is bad a tent is erected, according to the circumstances of the family. In fine weather no preparation is made. They are never confined in their own whares. The posture during labor is the kneeling one; the woman clasping her arms around one of the attendants, who supports and presses the abdomen, while the other receives the child at birth from behind.

The placenta is removed by pressure on the womb through the abdominal wall, and if there is any difficulty, the woman goes at once into the cold or tepid water, and by kneading the womb, as above described, the object is attained.

The placenta is invariably buried secretly. Allowing time and using pressure from without are their only modes of conducting labors. In cases that did not yield to these means the woman was allowed to die.

They know no internal operations at all; but as one of my most intelligent Maori informers said, "There is very seldom any trouble. Often the woman delivers herself alone, and brings in a kit of potatoes as well as the child."

On the completion of labor the mother and child bathe in the nearest cold water lake or creek (this is a custom which may some day be employed in our midwifery system for expelling clots), and after a good washing return to the whare. In very cold weather tepid water is used to wash the infant. In this district

warm water is used often for washing the first-born, but should the child die, cold water is always used for succeeding children in that family. This is a Maori custom.

In delayed labors the Maori priest-doctor, or "tohunga," is called in. He with incantations, etc., beguiles the weary hours, and should time effect the desired object, he is accounted a great man.

In connection with their free use of cold baths, the author mentions the fact, interesting to compare with our own practice of hydrotherapy, that having among the Maories a large number of fever cases (badly marked typhoid, with symptoms of an aguish type) he found it was the custom of his patients to bathe regularly in the cold water creek flowing through the "pah," or in the lake, whenever they felt their "skins very hot." No ill effects followed, and almost all the cases did well.

THE SENSE OF DIZZINESS IN DEAF-MUTES.

THE *Practitioner*, August, 1883, refers to experiments by Dr. James, of Cambridge, quoted in the *Otological Journal* for October, 1882, with a view to discover how far the directing power attributed to the semicircular canals is defective in persons whose organs are presumably damaged, namely, the inmates of deaf-mute institutions. His theory is that seeing the consciousness of movement of the head through space when exaggerated causes vertigo, as in whirling around rapidly, rising from the stooping posture suddenly, etc., "disease of the internal ear is likely to confer immunity from dizziness." He does not give any classification of the persons experimented on as to the lesions causing the deafness, which, indeed, it is not perhaps possible to do very precisely according to our present powers of diagnosis, and he has classed congenital deaf-mutes with those in which the deafness came on at various ages through disease, not having apparently found any difference in the results in the two classes. He has, however, eliminated, so far as possible, all causes of vertigo except that arising from the "directing sense." He has kept the patients' eyes closed so that they should not be confused by visual images on the retina in whirling around, and in almost all the experiments has used passive rotation so as to get rid of any muscular unsteadiness. His results are certainly very remarkable. He first tested 200 students and tutors in the Harvard College, and found only one among them free from dizziness on rotation, whereas of the deaf-mute cases, 519 in number, 186 remained perfectly free from the feeling, and 134 others are stated to have been only slightly affected. Passive rotation was effected by placing the patient in a swing of which the two ropes were tightly twisted, and then allowed to untwist. The swing was stopped when it had nearly come to rest, and the patient directed to walk to a fixed point, the dizziness being judged of by the irregularity of his gait.

Further inquiry was made among the "non-dizzy cases" as to whether the feeling was experienced in sudden rising from the stooping posture or other movements than whirling. The replies varied, and so were unsatisfactory.

Again, assuming that sea-sickness arises through over-excitement of the directing sense, as maintained by Helmholtz in his *Optics*, written before this special function of the semicircular canals was discovered, in-

quiry was made as to whether any of the deaf-mutes had suffered in rough weather at sea. Of fifteen cases who had been at sea not one had been affected. This result, though only negative evidence, is confirmatory of the theory, and he bases thereon a noteworthy suggestion of counter-irritation of the semicircular canals by blisters behind the ears as a remedy in that distressing ailment.

The noteworthy remark is made that the ataxia of the deaf is chiefly found in those who have become deaf from meningial or other disease, and is rare in congenital cases. This is accounted for by supposing that in the latter cases the central directing power has never formed any connection with the canals, whereas in the former such connection formed in early life, and lost through disease, left the central organ at fault. Again, it is suggested that as the ataxia tends to improve with time, no doubt from the formation in most instances of new peripheral connections, it may in some cases, as after diphtheria, be due to a temporary anæsthesia of the canal.

The investigation, though unfinished and in many respects inconclusive, is very suggestive and interesting, as it brings clinical facts in relation with recent physiological discoveries.

THE SIGNIFICANCE OF APPEARANCES OF THE TONGUE.

A COURSE of lectures on diseases of the tongue, delivered by Prof. Jonathan Hutchinson before the Royal College of Surgeons of England, is now appearing in the *Medical Press and Circular*. At the conclusion of the introductory lecture we find some suggestions of a practical nature regarding the interpretation of tongue symptoms, which we quote:—

First, we must avoid assuming hastily that the condition present has any connection with the disorder for which the patient consults us. Many patients have habitually a profuse growth of filiform papillæ and great tendency to the accumulation of fur. In others the papillæ are curiously absent, and the tongue may look bald or rough. In others the furrows may be well marked, and the peculiar fern-leaf pattern present, and yet these several conditions may imply nothing whatever as regards the patient's health.

In all conditions of peculiarity it is well to inquire whether the patient has ever at any former time been salivated or suffered from sore mouth. For it may easily be the fact that some attack of stomatitis, long past, may have left the tongue flabby, indented at its edges, fluted on its surface, or more or less bald.

In cases in which we have satisfied ourselves that the conditions shown are neither personal peculiarities nor yet the consequences of previous disease, we ought next to inquire carefully whether any local conditions are present in the mouth which will explain them, and by no means jump to the conclusion that they denote disorder of the stomach or liver. If the tongue is dry we inquire whether the nostrils are stopped, and if it is sore we must examine the teeth and ascertain whether from sharp, broken points, from stopping with amalgam, or accumulation of tartar, any possible source of irritation exists.

If we have failed to discover in the mouth any cause for disease on the surface of the tongue we must still hesitate as to suspicion of visceral or blood disorder, and ask whether it be not possible that some

irritant may have been introduced in the way of food. There are many fallacies in this direction.

Lastly, if we feel able to confidently exclude all local causes, and obliged to believe that the state of the tongue is in direct connection with the state of the bodily health, we have still before us the difficult task of deciding as to what the nature of the bond of connection may be.

The state in question may still possibly be in no way symptomatic of other disorder, and not in any degree consequent on it, but rather part of the general disease.

Above all we must be on our guard against believing that the state of the tongue is a trustworthy criterion as to that of the mucous membrane of the stomach, and remember that for the most part a furred tongue implies that no food has been eaten and little more, whilst glossitis and gastritis are conditions which are mutually independent, and but seldom coexist.

THE COUVREUSE, OR MECHANICAL NURSE.

We quote from the *Lancet* (August 11th) the following more detailed description of what was noticed in the *JOURNAL* some months ago:—

It was in 1878 that Dr. Tarnier, when visiting the apparatus devised by M. Odile Martin for artificially hatching and rearing chickens at the Jardin d'Acclimatation, suggested that a similar method might be applied with advantage to infants, especially in cases of premature birth. Two years elapsed, however, before any attempt was made to carry out this proposal; but in the course of the year 1880 a *couvreuse* was made, and brought to the hospital of the Maternité. This is a plain wooden case or box, measuring about two feet eight inches by two feet four inches, and two feet four inches in height. The box has a double covering, the space between being filled with sawdust to retain the heat, and is divided into two parts. The lower half contains a reservoir, which holds about sixty litres of water, and is fed by a patent boiler that stands outside the box, and is warmed by an oil lamp; or hot water may be used without recourse to the lamp. The upper portion of the box forms a warm chamber, where a little basket or cradle is placed, large enough to hold two infants. From an opening at the side, this cradle may be withdrawn, while the top of the box has a double glass covering, so that the children and the thermometer lying by their side can be constantly watched. If the water used in the first instance is cold, it takes a long time to attain the required temperature; but once this is done the lamp need only be relit three or four times during the course of the day. It is best to warm the apparatus while the infants are being fed or washed. The temperature within the *couvreuse* is generally maintained at 86° F., and though the contrast on withdrawing the child to be fed or washed is very great, amounting often to 30° F., colds are not so frequent as among the infants nursed in the ordinary manner. Altogether the experiment is considered so successful, that it is proposed to supply all the hospitals of France with a *couvreuse*, and there is every reason to anticipate good results from this measure. Nor is this all. A small portable *couvreuse* is now about to be tried which could be carried by hand from house to house. After this we shall probably have perambulators constructed on the same model. In conclusion, we should remark that, though no very careful experiments have been

made with respect to the ventilation within the *couvreuse*, yet this is evidently sufficient. Apertures are made in the lower portion of the box, the fresh air travels over the hot water reservoir, and is thus warmed before it reaches the child. The very great difference of temperature within the *couvreuse* insures a constant current of air, though the child is protected by its cradle and clothes from any draught.

CATALEPTIC STATE OF THE MUSCLES.

THE *Glasgow Medical Journal* has a note from the *Gazette des Hopitaux* (March 20, 1883) on the following phenomenon stated by M. Brown-Séquard at the Société de Biologie. He remarked that a condition resembling catalepsy may be produced in the muscles, and in them only. It cannot well be caused by the nervous system since this phenomenon may be produced more than two hours after death, and since the destruction of the spinal cord does not modify, but rather increases, it. This cataleptic state is so clear as to be beyond doubt. Any part will keep the position in which it is placed, and is always rigid; this is not cadaveric rigidity since it does not pass off. It is possible for this to occur in man.

It is known that convulsive movements have been observed in death from cholera and yellow fever. M. Brown-Séquard cited an example coming under his own notice. A man, several hours after death from cholera, brought his two hands together, lifting his arms into the air, and continued to repeat this for some time in the clearest way possible. An English author has recorded the same facts following a death from yellow fever. Lastly, convulsive movements are sometimes observed in a recently amputated limb.

M. Brown-Séquard has no doubt that these phenomena have their seat in the periphery, and not in the nervous centres. In summing up these facts we arrive at the conclusion that a peculiar state of the muscles, analogous to catalepsy, may occur, and that the contractile tissues may have certain actions more or less similar to those produced by the influence of the nervous system. The contractile tissues are, therefore, more closely allied to the nervous system than is generally supposed.

JAMES A. FLEMING, M. D.

ON the last day of September, at the Massachusetts General Hospital, died Dr. James A. Fleming, a physician who, though but thirty-one years of age, and but a comparatively few years in practice, had already won hosts of friends, and established what bade fair to be a very lucrative business.

It is rare to find a youth who encounters as successfully as Dr. Fleming so many obstacles in the way of advancement on his chosen path in life, and who exhibits a steady intellectual and professional growth in the face of poverty and encouragement half-hearted or wholly wanting.

Dr. Fleming from almost early childhood was obliged to rely on his own endeavors for support, and occupied many positions which would not be thought desirable by the average student, but which were all honorable in so far as they enabled him to earn an honest livelihood and to pursue his studies. He received the best education afforded by the Boston public schools, entering the Mayhew, going thence to the

English High, where he graduated at the head of his class with the respect and esteem of his teachers. A little later he entered the Harvard Medical School, from which he graduated with credit, taking his degree after eighteen months' service at the City Hospital as interne. In the competitive examination for this position he is said to have passed the best examination of all the applicants.

After leaving the Hospital he opened an office at the North End, and, with the exception of a short European tour, he steadily devoted himself to the practice of his profession in that quarter of the city. He rapidly won the confidence of many of the best families there, and at the time of his death had the brightest prospects for a large and lucrative practice.

He was a constant student, having already acquired a good knowledge of the French and Italian languages, and becoming convinced that to keep abreast of the times he needed also to be able to read the latest medical literature of Germany, he devoted himself with unusual zeal and perseverance to the acquirement of German, in which he made rapid progress. Dr. Fleming was for several years a member of the School Board, being at the time of his death chairman of the Committee on Accounts, and enjoying the confidence and respect of his associates. He was also surgeon of the Ninth Regiment M. V. M., at the last encampment of which began the illness which resulted in his death. His ready wit, geniality, and other social qualities endeared him to a circle of friends, many of whom were of different race, creed, and profession. As secretary of one of the social clubs of medical men of the city he contributed in no small degree to the enjoyment of the members, by whom he will be sadly missed.

Dr. Fleming's illness was of comparatively short duration, and its nature somewhat obscure, though pointing toward typhoid fever. He was not only supposed to be in no danger by his friends and medical attendants, but was thought to be just "comfortably sick." He, on the other hand, was thoroughly and firmly convinced that he should never recover, and he made every preparation, even to the smallest matters, for the event of his death.

The kindness and consideration for the poor which he ever manifested in his practice was strikingly illustrated in his very last moments, when, thoroughly conscious of his rapidly approaching dissolution, he said to his friend, Mr. Dacy, "I'd like the staff of the regiment to come to my funeral, but don't have the regiment turn out, for the men are poor, and cannot afford to lose a day's work."

In his death the medical profession have lost from their ranks a young man of excellent promise, a careful and conscientious physician, an earnest student, and an honorable gentleman, who would have reflected credit upon his profession and his city had he been spared.

At his funeral, which was very largely attended, were present very many of his medical brethren.

—The *Medical Press* (September 5th) contains the report of a case of hydrophobia occurring four hundred and fifty days after the bite which caused it. The animal showed marked signs of rabies at the time, but the wound had been thoroughly cauterized with a hot iron.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 29, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	530	233	24.82	16.54	14.72	2.26	4.14
Philadelphia.....	846,984	324	129	18.48	14.78	3.70	4.11	3.85
Brooklyn.....	566,689	245	99	27.45	16.20	13.50	.90	5.40
Chicago.....	503,304	215	122	33.95	8.37	13.95	2.79	9.30
Boston.....	362,535	183	74	30.58	13.65	16.38	5.46	6.55
St. Louis.....	350,522	163	69	33.10	4.29	9.81	3.07	5.52
Baltimore.....	332,190	150	71	38.66	9.99	4.66	1.33	13.33
Cincinnati.....	255,708	70	33	22.85	14.28	10.00	8.57	1.43
New Orleans.....	216,140	138	45	22.76	16.56	2.88	—	2.16
District of Columbia.....	177,638	75	36	18.62	18.62	6.66	1.33	—
Pittsburg.....(1883)	175,000	63	35	31.40	7.85	15.70	4.71	6.28
Buffalo.....	155,137	72	35	29.19	12.51	19.46	4.17	2.79
Milwaukee.....	115,578	50	26	26.00	8.00	12.00	2.00	10.00
Providence.....(1883)	116,755	43	10	25.63	9.32	9.32	4.36	9.33
New Haven.....(1883)	73,000	22	7	27.33	10.22	13.66	—	9.00
Charleston.....	49,999	35	14	5.72	8.58	—	4.86	—
Nashville.....	43,461	22	6	27.33	—	9.11	13.66	—
Lowell.....	59,485	25	10	20.00	40.00	12.00	4.00	—
Worcester.....	58,295	23	13	17.40	21.75	4.35	4.35	8.70
Cambridge.....	52,740	28	6	14.28	28.56	10.71	3.57	—
Fall River.....	49,006	24	12	29.11	20.40	20.40	4.16	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	14	4	14.28	7.14	7.14	7.14	—
Springfield.....	33,340	11	2	45.45	—	9.09	18.18	—
Salem.....	27,598	15	6	20.00	33.33	6.66	6.66	—
New Bedford.....	26,875	7	3	14.28	—	14.28	—	—
Somerville.....	24,985	7	3	—	28.56	—	—	—
Holyoke.....	21,851	10	4	10.00	10.00	—	10.00	—
Chelsea.....	21,785	7	2	14.28	28.56	—	—	14.28
Taunton.....	21,213	9	1	11.11	11.11	11.11	—	—
Gloucester.....	19,329	9	5	33.33	—	—	22.22	11.11
Haverhill.....	18,475	6	1	16.66	33.33	16.66	—	—
Newton.....	16,995	6	3	33.33	16.66	33.33	—	—
Brockton.....	13,608	3	1	—	—	—	—	—
Newburyport.....	13,537	4	2	25.00	—	—	25.00	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	4	1	—	—	—	—	—
Twenty-three Massachusetts towns.	182,027	55	19	20.00	16.36	16.36	1.82	1.82

Deaths reported 3667: under five years of age, 1142: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 673, diarrhoeal diseases 281, consumption 275, lung diseases 189, diphtheria and croup 141, typhoid fever 84, malarial fevers 63, scarlet fever 50, whooping-cough 19, small-pox 13, cerebro-spinal meningitis nine, erysipelas seven, measles three, puerperal fever three. From *malarial fevers*, St. Louis 16, New Orleans 15, New York 12, Brooklyn eight, Baltimore seven, Philadelphia and Salem two each, Fall River one. From *scarlet fever*, Philadelphia and Chicago 11 each, St. Louis eight, New York five, Brooklyn and Baltimore four each, Pittsburg three, Boston, New Orleans, Buffalo, and Charleston one each. From *whooping-cough*, District of Columbia six, New York five, Brooklyn four, Chicago three, Buffalo one. From *small-pox*, New Orleans 10, Philadelphia two, Nashville one. From *cerebro-spinal meningitis*, New York two, Chicago, Boston, Baltimore, Cincinnati, Milwaukee, Lowell, and Salem one each. From *erysipelas*, Boston two, Brooklyn, Chicago, Baltimore, Cincinnati, and District of Columbia one each. From *measles*, Baltimore, District of Columbia, and New York one each. From *puerperal fever*, Chicago, Providence, and New Haven one each.

Two cases of small-pox were reported in St. Louis; typhoid fever 55, diphtheria 31, and scarlet fever 28 in Boston.

In 42 cities and towns of Massachusetts, with an estimated population of 1,165,386 (estimated population of the State 1,922,530), the total death-rate for the week was 20.08 against 17.62 and 22.45 for the previous two weeks.

In the 28 greater towns of England and Wales, with an esti-

mated population of 8,620,975, for the week ending September 15th, the death-rate was 19.3. Deaths reported 3184: diarrhoea 314, acute diseases of the respiratory organs (London) 157, scarlet fever 111, fever 72, whooping-cough 57, measles 52, diphtheria 28, small-pox (Birmingham nine, Sunderland three, London one) 13. The death-rates ranged from 13.2 in Bradford to 26.9 in Manchester; Bristol 14; London 16.6; Nottingham 17; Leicester 18.9; Birkenhead 20.6; Birmingham 31.3; Brighton 22.5; Leeds 24.3; Liverpool 24.7; Blackburn 25. In Edinburgh 13.7; Glasgow 24.6; Dublin 27.5.

For the week ending September 8th, in 170 German cities and towns, with an estimated population of 8,716,123, the death-rate was 25.4. Deaths reported 4112; under five years of age, 2358; consumption 458, diarrhoeal diseases 384, lung diseases 252, diphtheria and croup 183, scarlet fever 87, typhoid fever 68, whooping-cough 50, measles and röteln 34, puerperal fever 22. The death-rates ranged from 10.7 in Metz to 35.3 in Magdeburg; Königsberg 32.2; Breslau 31.8; Munich 28; Dresden 27.4; Berlin 27.7; Leipzig 17.8; Hamburg 22.5; Cologne 23.4; Frankfurt 14.9; Strasburg 20.1.

For the week ending September 15th, in the Swiss towns, there were 37 deaths from diarrhoeal diseases, consumption 28, lung diseases five, measles two, scarlet fever two, diphtheria and croup two, typhoid fever one, puerperal fever one. The death-rates were, at Geneva 11.3, Zurich 14, Basle 19.8; Berne 23.7.

The meteorological record for the week ending September 29th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sept., 1883.																			
Sun., 23	30.164	50	67	47	90	73	86	83	W	SE	SW	2	6	4	F	O	O	—	—
Mon., 24	29.743	58	67	54	86	93	100	93	SW	NE	W	3	12	12	O	R	R	—	—
Tues., 25	29.514	56	72	54	62	30	61	51	SW	SW	W	27	32	20	C	F	C	—	—
Wed., 26	30.021	46	64	43	60	53	67	60	W	W	W	10	6	9	C	C	C	—	—
Thurs., 27	30.045	49	70	42	56	42	87	62	SW	SW	SW	11	17	8	C	C	O	—	—
Fri., 28	29.997	62	73	54	87	51	69	69	SW	W	E	11	9	6	C	O	O	—	—
Sat., 29	30.122	48	64	47	74	42	80	65	NW	W	W	6	7	4	O	C	O	—	—
Means, the week.	29.944	53	73	42				69										14.10	.84

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM SEPTEMBER 22, 1883, TO OCTOBER 2, 1883.

RICHARD, CHARLES, first lieutenant and assistant surgeon. Granted leave of absence for two months, with permission to apply for extension of two months. Paragraph 1, S. O. 49, Military Division of the Atlantic, September 25, 1883.

WAKEMAN, WILLIAM J., first lieutenant and assistant surgeon. Relieved from temporary duty at Fort Sidney, Neb., to rejoin his proper station at Fort D. A. Russell, Wyoming. Paragraph 5, S. O. 103, Department of the Platte, September 22, 1883.

TILTON, H. R., major and surgeon. Assigned to duty as post surgeon at Fort Wayne, Michigan. Paragraph 4, S. O. 183, Department of the East, September 28, 1883.

BRECHEMIN, LOUIS, captain and assistant surgeon. Relieved from duty at Fort Columbus, New York Harbor, and assigned to duty at Fort Wadsworth, New York. Paragraph 5, S. O. 183, Department of the East, September 28, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEKS ENDING SEPTEMBER 29 AND OCTOBER 6, 1883.

BEARDSLEY, G. S., surgeon, granted leave of absence for six months, with permission to leave the United States.

AUSTIN, A. A., passed assistant surgeon, orders to Naval Hospital, New York, revoked, and placed on waiting orders.

LIPPINCOTT, GEORGE C., passed assistant surgeon, ordered to the Naval Hospital, New York.

PECK, GEORGE, medical director, detached from the Naval Hospital, Mare Island, Cal., and placed on waiting orders.

McMURTRIE, D., surgeon, and CRAWFORD, M. H., passed assistant surgeon, ordered to report at Washington, D. C., October 3d, for medical survey.

Du Bois, F. L., surgeon, detached from Naval Rendezvous, Philadelphia, and ordered as member of the Medical Examining Board, Philadelphia.

RUSH, CHARLES W., passed assistant surgeon, detached from the Naval Hospital, New York, and ordered to the Receiving Ship Colorado, New York.

JONES, M. D., passed assistant surgeon, detached from the Naval Hospital, Washington, D. C., and ordered to the Naval Hospital, New York.

ASHBRIDGE, RICHARD, passed assistant surgeon, detached from the Naval Academy, and ordered to the U. S. S. Swatara.

THE SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY will meet on Saturday, October 13, 1883, at 7.45 o'clock, at 19 Boylston Place. Paper: Nineteen Cases of Internal Urethrotomy, with Remarks, Dr. F. S. Watson. Dr. G. H. Tilden will open the discussion.

H. C. HAVEN, Secretary.

BOOKS AND PAMPHLETS RECEIVED.—Elements of Histology. By E. Klein, M. D., F. R. S. Illustrated with One Hundred and Eighty-One Engravings. Philadelphia: Henry C. Lea's Son & Co. 1883.

Transactions of the Michigan State Medical Society for the Year 1883. Lansing. 1883.

Eclectic Medical College of the City of New York. Twenty-Third Announcement and Catalogue. 1883.

Transactions of the Medical Society of the State of Pennsylvania at its Thirty-Fourth Annual Session. Held at Norristown, May 9-11, 1883. Volume XV. Published by the Society. 1883.

Remarks on Hydrophobia. Read before the Philadelphia County Medical Society, May, 1883. By Charles W. Dulles, M. D. (Reprint.)

Types of Insanity. An Illustrated Guide in the Physical Diagnosis of Mental Disease. By Allan McLane Hamilton, M. D. New York: William Wood & Co. 1883.

Cases of I. Rudimentary Uterus and Vagina. II. Cyst of Gartner's Canal. A Paper Read before the Maine Medical Association, June 12, 1883. By Stanley P. Warren, M. D., of Portland. 1883.

The Influence of Medical Men. By Nathan Allen, M. D., of Lowell, Mass. Read before the American Academy of Medicine at its annual meeting in Philadelphia, October 26, 1882.

A Complete Handbook of Treatment. Arranged as an Alphabetical Index of Diseases to facilitate Reference, and containing nearly One Thousand Formulæ. By William Aitken, M. D. (Edin.), F. R. S. New York: Bermingham & Co. 1882.

The Pathology, Diagnosis, and Treatment of the Diseases of Women. By Graily Hewitt, M. D. Lond., F. R. C. P. A New American from the Fourth Revised and Enlarged London Edition. With Two Hundred and Thirty-Six Illustrations. Edited, with Notes and Additions, by Harry Marion-Sims, M. D. Two volumes. New York: Bermingham & Co. 1883.

A Practical Manual of the Diseases of Children, with a Formulary. By Edward Ellis, M. D. Fourth Edition, Revised and Enlarged. New York: Bermingham & Co. 1882.

An Encyclopædic Index of Medicine and Surgery. Edited by Edward J. Bermingham, A. M., M. D. New York: Bermingham & Co. 1882.

Insanity, its Classification, Diagnosis, and Treatment. A Manual for Students and Practitioners of Medicine. By E. C. Spitzka, M. D. New York: Bermingham & Co. 1883.

The Diagnosis and Treatment of Diseases of the Ear. By Oren D. Pomeroy, M. D. With One Hundred Illustrations. New York: Bermingham & Co. 1883.

Practical Clinical Lessons on Syphilis and the Genito-Urinary Diseases. By Fessenden N. Otis, M. D. New York: Bermingham & Co. 1883.

A Pocket Book of Physical Diagnosis of the Diseases of the Heart and Lungs for the Student and Physician. By Dr. Edward T. Bruen. Second Edition, Revised, with Additional Illustrations. Philadelphia: P. Blakiston, Son & Co. 1883.

The Roller Bandage. By William Barton Hopkins, M. D. With Seventy-Three Illustrations. Philadelphia: J. B. Lippincott & Co. 1883.

Quiz-Compends No. 9. A Compend of Surgery for Students and Physicians. By Orville Horwitz, B. S., M. D. With Fifty Illustrations. Philadelphia: P. Blakiston, Son & Co. 1883.

Original Articles

THE NEW CENTURY AND THE NEW BUILDING OF THE MEDICAL SCHOOL OF HARVARD UNIVERSITY.

BY OLIVER WENDELL HOLMES, M. D., LL. D.

THE Medical School of Harvard University enters, with the commencement of the present season, upon the second century of its existence. By a fortunate coincidence it takes possession at this same time of the noble edifice which a generous public has reared for the use of the teachers and students of this institution.

Yesterday; to-day; to-morrow. Let us look backward at the period when this school began its teachings, and mark some of the longer strides which bring the professional condition of the earlier epoch to that of our own. Let us see where we stand to-day, and we shall know better what to hope for the future of the teaching, the science, and the art of healing.

We are in the habit of counting a generation as completed in thirty years, but two lives cover a whole century by an easy act of memory. I, who am now addressing you, distinctly remember the Boston practitioner who walked among the dead after the battle of Bunker's Hill, and pointed out the body of Joseph Warren among the heaps of slain. Look forward a little while from that time to the period at which this Medical School was founded. Eight years had passed since John Jeffries was treading the bloody turf on yonder hill-side. The independence of the United States had just been recognized by Great Britain. The lessons of the war were fresh in the minds of those who had served as military surgeons. They knew what anatomical knowledge means to the man called upon to deal with every form of injury to every organ of the body. They knew what fever and dysentery are in the camp, and what skill is needed by those who have to treat the diseases often more fatal than the conflicts of the battle-field. They knew also, and too well, how imperfectly taught were most of those to whom the health of the whole community was intrusted.

Dr. John Warren, a younger brother of Dr. Joseph Warren who fell at Bunker's Hill, was the first mover in the project of founding a medical school in connection with Harvard College, and was the first Professor of Anatomy and Surgery. Those who remembered his teaching have spoken to me with admiration of the eloquence and enthusiasm with which he lectured. Dr. John Warren was a man of great energy, spirit, and ability. The Lectures of the newly founded school were delivered in Cambridge until the erection of the building known as the Massachusetts Medical College, in Mason Street, in the year 1815. It was no easy matter for a busy Boston practitioner to deliver a course of lectures in the University town. But Dr. Warren did not ask whether it was easy or not. "In the fulness of professional business he daily passed over Charlestown ferry to Cambridge, there not being a bridge at that time; and sometimes, when impeded by ice, was compelled to take the route through Roxbury and Brookline to Cambridge, and to return on the same morning, after himself performing the dissections and giving a lecture sometimes three hours long." So tells us worthy Dr. Thacher, in the Appendix to his American Medical Biography.

Benjamin Waterhouse, honorably known for having been the introducer of vaccination into America, was the first Professor of the Theory and Practice of Medicine. I remember him well, and carry the scar of the vaccination he performed on me. His powdered hair and queue, his gold-headed cane, his magisterial air and diction, were familiar to me from my boyhood. Dr. Waterhouse had his degree from Leyden, where he wrote and defended a Thesis, *De Sympathia Partium Corporis Humani, ejusque in explicandis et curandis morbis necessaria consideratione*. He had some learning, which he was disposed to make the most of, as perhaps we all are if we have it, and laid himself open to the playful sallies of the students of his time, one of whom announced a course of Lectures on Oudenology, which was supposed to be a travesty of some of his prelections.

The first Professor of Chemistry was Aaron Dexter. It was the forming period of that science. Black, Cavendish, Priestley, Lavoisier were building it up with their discoveries. A course of Chemical Lectures delivered in Boston or Cambridge at that day was probably, as it certainly was at a later day, very entertaining and not wholly uninteresting. Phlogiston had not yet definitively taken itself to the limbo of negative entities. But however crude the theories, we may be pretty sure that there was left in the student's mind a memory of startling precipitations, of pleasing changes of color, of brilliant coruscations, of alarming explosions, and above all of odors innumerable and indescribable.

It is sad to think that Professors honored in their day and generation should often be preserved only by such poor accidents as a Sophomore's jest or a graduate's anecdote. The apparatus of illustration was doubtless very imperfect in Dr. Dexter's time, compared to what is seen in all the laboratories of to-day. We may admire his philosophy and equanimity, therefore, in recalling the story I used to hear about him.

"This experiment, gentlemen," he is represented as saying, "is one of remarkable brilliancy. As I touch the powder you see before me with a drop of this fluid, it bursts into a sudden and brilliant flame," which it most emphatically does *not* do as he makes the contact. "Gentlemen," he says with a serene smile, "the experiment has failed,—but the principle, gentlemen, the principle remains firm as the everlasting hills."

Three teachers only, where we have forty, or nearly that number! But when the great University of Göttingen was established the illustrious Haller filled the one Chair of Botany, Anatomy, Surgery, and Medicine. I called it a Chair,—it was rather a Settee of Professorships.

It is to be regretted that we have not a list of the text-books in use during that first period of the School. Dr. Waterhouse would naturally refer his students to the learned Gaubius, the voluminous Van Swieten, the illustrious Boerhaave. The excellent Dr. Fothergill was his uncle; the immortal Jenner was his second Creator, and their names, with that of Dr. Lettsom, were often on his lips. Sydenham, Pringle, and Cullen he speaks of as being in the hands of all his students, and his references show a considerable extent of reading.

The text-books in Anatomy were probably Cheselden and Monro, perhaps Winslow, and, for those who could read French, Sabatier. The Professor himself had the magnificent illustrated works of Albinus and of Haller, the plates of Cowper (stolen from Bidloo) and others. The student may have seen from time to time

if he did not own, the figures of Eustachius and of Haller. Haller's First Lines of Physiology were doubtless in the hands of most students. The works of Pott, of Sharp, and most of all of John Hunter, were taking the place of Heister and the other earlier authorities.

Smellie was probably enough the favorite in his department. What chemical text-books Dr. Dexter put into the hands of his students in 1783 I will not venture to conjecture.

And now I will ask you to take a stride of half a century, from the year 1783 to the year 1833. Of this last date I can speak from my own recollection. In April, 1833, I had been more than two years a medical student attending the winter lectures of this school, and have therefore a vivid recollection of the Professors of that day. I will only briefly characterize them by their various merits; not so much troubling myself about what may have been their shortcomings. The shadowy procession moves almost visibly by me as I speak: John Collins Warren, a cool and skillful operator, a man of unshaken nerves, of determined purpose, of stern ambition, equipped with a fine library, but remarkable quite as much for knowledge of the world as for erudition, and keeping a steady eye on professional and social distinction, which he attained and transmitted: James Jackson, a man of serene and clear intelligence, well instructed, not over book-fed, truthful to the centre, a candid listener to all opinions; a man who forgot himself in his care for others and his love for his profession; by common consent recognized as a model of the wise and good physician: Jacob Bigelow, more learned, far more various in gifts and acquirements than any of his colleagues; shrewd, inventive, constructive, questioning, patient in forming opinions, steadfast in maintaining them; a man of infinite good nature, of ready wit, of a keen sense of humor, and a fine literary taste; one of the most accomplished of American physicians; I do not recall the name of one who could be considered his equal in all respects: Walter Channing, meant by nature for a man of letters, like his brothers William Ellery and Edward; vivacious, full of anecdote, ready to make trial of new remedies, with the open and receptive intelligence belonging to his name as a birthright; esteemed in his specialty by those who called on him in emergencies. The Professor of Chemistry of that day was pleasant in the lecture room, rather nervous and excitable, I should say, and judiciously self-conservative, when an explosion was a part of the programme.

Those who are curious to know what hand-books we students used in 1833 will find they were nearly as follows. In Anatomy, the works of John and Charles Bell, that of Wistar, and the Dublin Dissector. In Physiology, Haller's First Lines and Richerand. In Chemistry, Webster's edition of Brande. In Surgery, Samuel Cooper's work, with his Surgical Dictionary as a book of reference. In Theory and Practice Dr. Good's Study of Medicine was adopted by Dr. James Jackson and generally followed. Gregory's Practice was often seen in the student's hands and Laennec's Treatise on Diseases of the Chest and their Physical Signs was just coming to their notice in the form of Dr. Forbes's Translation. Denman and Dewees were the favorites in their special branches. Bigelow's Sequel to the Pharmacopœia was much sought after by the students of this school. Like the excellent and serviceable work recently published by his successor in the Chair of Materia Medica, it was,

unpretentious enough for the most scrupulous teachers of the high and dry Northern latitudes.

Other works read by students were Hunter on the Blood, Fordyce on Fever, Heberden, and of course Cullen and the earlier standards which happened to be in their instructors' libraries. Louis was just beginning to be known among us. The Lectures of Sir Astley Cooper and of Mr. Abernethy were eagerly read. One fellow-student of mine read through the three solid quartos of Morgagni. These are the principal authorities I recall as lying about our study and lecture rooms. But my memory is, no doubt, sometimes at fault.

Great stories had been reaching us for some time of the schools and hospitals of Paris. Dr. John Jackson, nephew of our old Professor, came home with news of the fine opportunities there offered. Young James Jackson, the Professor's son, was there still, writing home letters which remain on published record, to show how much of talent, zeal, and high promise was lost to the Medical Profession by his early death. Especially did he speak of Louis, whom he had chosen as his principal teacher, and of whom he became the favorite pupil and the very dear friend. These circumstances decided me to seek the same centre of instruction, and so, in April, 1833, I left Boston to pursue my studies in Paris. Dr. John Jackson bade me farewell with a look as if I were indeed on my way to the good Bostonian's heaven, and handed me a small square of India-rubber, his own newly-suggested pleximeter, or instrument to be used for mediate percussion, which he wished me to show to Louis and the other great Paris doctors.

I have said something of my Boston teachers, and I will devote a few words to those whose instructions I followed in Paris, and to their most renowned professional contemporaries in other European countries, at the risk of some repetition of what I have said elsewhere.

Old Boyer, Baron Boyer, who, in spite of his title, kept his own books for sale at his own house, was still creeping around the wards of La Charité. At Hotel Dieu was the great surgeon Dupuytren. On the other side of the river was his large and loud rival, Lisfranc. Roux, best known by his report of his medical visits to England, was operating and lecturing, — lecturing, parenthesis within parenthesis, — ovum, germinal vesicle, germinal spot, until his embryo meaning vanished in the invisible; Velpeau, a reclaimed rustic, who by sturdy industry grew out of his wooden shoes into an erudite author and teacher and a celebrated practitioner; Civiale, the inventor of lithotripsy; Ricord, whose mercurial temperament, to say nothing of his practice, displayed itself in his lively clinical promenades; these were some of the more famous surgical celebrities of fifty years since. Louis, Andral, Chomel, Rostan, Trousseau, Bouillaud were the best known teachers of clinical medicine. Cruveilhier was Professor of Anatomy in the École de Médecine, and Orfila, the handsome Dean of the Faculty, lectured upon some branches of medical jurisprudence. Two or three water-logged old Professors were moored to their chairs; one of them not so very old, but with a good many ancient barnacles about him; one formidable three-decker, Broussais, with his upper tier of guns still above the water-line, and hanging away at the assails of his famous "physiological doctrine." Some of the specialists I recall were Sichel in ophthalmology,

Bielt in dermatology, Dubois the younger, and a younger Baudelocque, inventor of a certain lemon-squeezer-like machine, about as threatening to the future of the race as the invention of that other medical practitioner, Dr. Guillotin.

The works in the hands of French students were those of the great teachers and practitioners just mentioned. Jules Cloquet's Anatomy was a favorite manual. Sabatier's and Maygrier's were sometimes met with. The much more extensive and thorough work of Cruveilhier was a little later to come into common use. The great work of the same author on Pathological Anatomy was of a still later date. Burgery's magnificent, somewhat dandified Anatomy, if I may borrow this term, was in course of publication. Its showy figures were got up like opera dancers, primarily for anatomical study and secondarily for æsthetic gratification. Magendie's Physiology had replaced that of Richerand. Boyer was still a leading authority in Surgery. The name of Jean Louis Petit was frequently cited in the lectures of Marjolin, himself scarcely remembered at the present day. Bayle and Corvisart were giving place to Louis and Bouillaud. Laennec held his position as few inventors and discoverers can hope to do in the face of the after-comers who improve on their improvements.

What had been the most signal advances in the science and art of medicine between 1783 and 1833, the first half of the century we are considering?

In medical science the method of studying the human body by its constituent elements,—the *General Anatomy* of Bichat,—which is to common descriptive anatomy what geology is to geography, would still hold the first place if it could claim all that the microscope has done for it. It was at any rate a great onward movement, with far-reaching results for physiology and pathology.

Next to this would come the discoveries of Sir Charles Bell and Magendie of the distinct motor and sensitive functions of certain nerves and nerve-roots.

The most important practical achievement was the introduction of vaccination. I know that this practice has been and is even at the present day the subject of violent attacks and bitter prejudices. It is only very recently that our distinguished visitor—our fellow citizen,—by the female side,—the Right Honorable Sir Lyon Playfair, at home alike in the laboratory of science and when presiding over the deliberations of the British House of Commons, has had to defend it,—nobly and successfully he did it,—in that august assembly. There is always an unconvinced and irreclaimable minority. Those who believed not Moses and the Prophets would not believe though one rose from the dead to convince them. Most of us, I feel sure, are ready to say of Jenner's discovery, borrowing some of Luther's words about justification by faith, that vaccination is a test *stantis vel cadentis medicinæ*.

Laennec's invention of auscultation holds the next place to vaccination in the records of practical improvement during our first half century. The recognition of the affection of the kidneys known as "Bright's disease," and the separation of the too familiar and fatal malady, diphtheria, from those with which it was long confounded, are other notable advances made during the period in question.

If we compare the two half centuries, we may balance the following improvements against each other:

Against the discovery of the double nerve function the extended knowledge of the reflex function.

Against "General Anatomy," the Cell-doctrine, due to the discoveries made by the use of the achromatic microscope, to which we also owe the discovery of the minute organisms, so important in the history of disease.

Against vaccination we may offset surgical anæsthesia.

Against the stethoscope the medical thermometer.

We must divide the honors of lithotripsy and those of ovariectomy between the two periods.

The beneficent changes in the treatment of insanity effected by the earlier labors of Pinel and Esquirol have been admirably carried on in the more recent period.

Many other and not inconsiderable improvements in medical science and art had taken place in our first half century, as may be seen in Cuvier's Report on the Progress of the Natural Sciences. But the last fifty years have been not less richly productive. I can only indicate in the briefest manner some few among their acquisitions.

Modern scientific chemistry is a mystery to us who were brought up in the old school of pyrotechnic experimenters. It seems to us to make over its theories and its nomenclature about once in ten or twenty years. But that may be our ignorance. We know as much as this, that our Professors teach real and most valuable practical knowledge by making the student work, and work thoroughly, in the laboratory.

Physiology is a new science, we might almost say, since the perfecting of organic analysis, the invention of the achromatic microscope, and of the numerous instruments of precision which record the vital actions and conditions.

Anatomy has added the more exact study of regions and of sections to its earlier methods of investigation.

Operative surgery has of late years achieved its greatest triumph in the establishment of abdominal section as a legitimate and safe operation. First employed by an American surgeon, Dr. McDowell, of Kentucky, in 1809, in the hands of Spencer Wells and his contemporaries it has rescued and is rescuing hundreds of lives. Tenotomy by subcutaneous section is another new and valuable operation. Plastic surgery has learned to patch deformities as a skilful housewife patches a garment. Limbs which would have been sacrificed, are saved by improved methods of dressing, especially by the use of antiseptics. Resection of joints or of portions of the shaft of a bone has in many cases taken the place of amputation. Let me not forget the operation of paracentesis with aspiration of the thorax in acute pleurisy, as first practised by Dr. Henry Ingersoll Bowditch and Dr. Morrill Wyman. But enough has been said to show that the last half of our century has justified itself for existing. I shall return to some of these matters when speaking of the new edifice where they are to be the subjects of instruction.

In the prevention of disease the gain has been extraordinary. The germ-theory, alluded to as one of the results of the perfecting of the microscope, has done much to account for the phenomena of many diseases and to indicate the means of arresting their development. The recognition of domestic malaria as the frequent source of disease is of vast importance. The phrase "drain fever" has saved hundreds of lives.

It is harder to speak of medical practice—the treatment of internal diseases, fevers, visceral inflammations

and the like. The practice of drugging for its own sake, the fatal bequest of the English apothecary, or "general practitioner," whose profit was made on his medicines, had infected the medical profession of this country, as I believed, when some twenty and more years ago in guarded terms, often misquoted, I denounced it somewhat too epigrammatically for some of my friends of the Massachusetts Medical Society. Professor Gairdner of the University of Glasgow has recently used language much plainer than my innocent allusion to the probable effect of sinking a cargo of miscellaneous drugs among the fishes. It has been objected, he says, "that the Scottish graduate in medicine was not sufficiently conversant with the details of compounding and dispensing powders, and pills, and mixtures, and above all draughts (at 2s. 6d. a piece) to be taken two, three, four or five times a day; in other words, that he had not sufficiently mastered the technical details by which his neighbor, the English apothecary, was able to accomplish the great ideal of the 'surgery-boy' type—the dispensing of immense quantities of 'physic' in the most complicated prescriptions, to pass unquestioned down the willing throats of Her Majesty's lieges." There can be little doubt that the practice thus originating influenced the whole professional public of England to a very considerable extent, and through that public introduced the over-drugging system into her colonial dependencies and the States which some of these became. However this may be, great changes have taken place within the later decades of my remembrance in the practice of medicine. Bleeding is an almost unknown operation. Of the four great remedies of Dr. Holyoke's and Dr. James Jackson's time, antimony has fallen from grace, and calomel, instead of being next the apothecary's right hand, as the letter e is to the printer's, has gone to an upper shelf, where it may be supposed to repent of its misdeeds like Simeon Stylites. Cotton Mather had said a century and a half ago, "I am not sorry that antimonial emetics begin to be disused." He had said too, more rhetorically, "Mercury, we know thee: but we are afraid thou wilt kill us too, if we employ thee to kill them that kill us." This was a lively way of putting a thought long afterward made into a famous saying.

While old drugs and old methods have become obsolete, new drugs and new methods have come in to take their place. The first aphorism of Hippocrates, "Life is short, art is long," and so on, is a glittering generality. The second aphorism is one of daily practical application, never to be forgotten. "Not only must the physician attend properly to his own duties, but he must see that the patient, the attendants, and all the external conditions are properly ordered." As the over-employment of drugs gives way to juster views, the hygienic conditions and personal attendance on the patient are like to be better cared for. The less the patient is annoyed with over-medication,—painful and disgusting remedies,—the more tractable he is like to be, and the less likely to throw his medicine out of the window, where it will kill the chickens instead of the fishes. The more attention is like to be paid to air and cleanliness and comfort, the more to the kind of nourishment and the modes and times of giving it. In proportion as the work of the apothecary diminishes the cares of the nurse are called upon to render disease endurable by all the arts known to a skilful attendant. Little things mean a great deal in the sick room. "Will you have an orange or a fig?" said Dr. James

Jackson to a fine little boy now grown up to goodly stature, and whom I may be fortunate enough to recognize among my audience of to-day. "A fig," answered Master Theodore, with alacrity. "No fever there!" said the good Doctor, "or he would certainly have said an orange."

Now it is in just these little unimportant, all-important matters that a good nurse is of incalculable aid to the physician. And the growing conviction of the importance of thorough training of young women as nurses, is one of the most hopeful signs of medical advancement. So much has been done and is doing that the days of the Sairey Gamps and Betsey Prigs are numbered. I cannot help saying in this connection that the Registry of Nurses fortunately connected with the Boston Medical Library, itself of comparatively recent formation, is a blessing to our community which can hardly be over-estimated. What is there in the hour of anguish like the gentle presence, the quiet voice, the thoroughly trained and skilful hand of the woman who was meant by nature and has been taught by careful discipline to render those services which money tries to reward but only gratitude can repay? I have always felt that this was rather the vocation of woman than general medical, and especially surgical practice. Yet I myself followed a course of lectures given by the younger Madame Lachapelle in Paris, and if here and there an intrepid woman insists on taking by storm the fortress of medical education, I would have the gate flung open to her as if it were that of the citadel of Orleans and she were Joan of Arc returning from the field of victory. I have often wished that disease could be hunted by its professional antagonists in couples,—a doctor and a doctor's quick-witted wife making a joint visit and attacking the patient,—I mean the patient's malady, of course,—with their united capacities. For I am quite sure that there is a natural clairvoyance in a woman which would make her as much the superior of man in some particulars of diagnosis as she certainly is in distinguishing shades of color. Many a suicide would have been prevented if the doctor's wife had visited the victim the day before it happened. She would have seen in the merchant's face his impending bankruptcy while her stupid husband was prescribing for his dyspepsia and indorsing his note; she would recognize the lovelorn maiden by an ill-adjusted ribbon—a line in the features,—a droop in the attitude,—a tone in the voice,—which mean nothing to him, and so the brook must be dragged to-morrow. The dual arrangement of which I have spoken is, I suppose, impracticable, but a woman's advice, I suspect, often determines her husband's prescription. Instead of a certain lecture on his own failings he gets a clinical lecture,—on the puzzling case, it may be, of a neighbor suffering from the complaint known to village nosology as "a complication of diseases," which her keen eyes see into as much better than his as they would through the eye of a small-sized needle. She will find the right end of a case to get hold of, and take the snarl out as she would out of a skein of thread or a ball of worsted which he would speedily have reduced to a hopeless tangle.

I trust I have not dwelt too long on this point, which grew out of my consideration of the great change that has so largely substituted the careful regulation of all the conditions surrounding the patient for the drugging system derived from the practice of the English "Apothecaries." Like the Father of

Medicine in the aphorism which I have quoted, we consider attention to these conditions entitled to precedence relatively to all active interference with the course of disease.

Yet we must not be ungrateful to the pharmacist for the useful agents, old and new, which he puts in our hands. Opium and cinchona appear in our modern pharmacopœia with all their virtues, but freed by chemical skill of the qualities which most interfered with their utility. Mercury is no longer considered a panacea, but it is still trusted for important special services. Most of the remedial plants have yielded their essential principles to chemical analysis and have got rid of the useless portions which made them bulky and repulsive. Iodine, bromine, salicine in their various compounds have, within the present century conferred inestimable aid in the treatment of some of the most formidable diseases. Many other new remedies, such as carbolic acid, glycerine, chloral, have been added to the list of those which are of daily use in combating particular symptoms, or are adapted to certain exceptional conditions. The method of administering remedies by inhalation has been greatly extended, and the admirable invention of the process of subcutaneous injection, — a method, I may remark, tried upon himself and made the subject of a thesis by the late Dr. Enoch Hale, a graduate of this school, — has become next to etherization the most rapid and potent means of subduing pain and other forms of suffering. I need not speak of medical electricity, which has proved so serviceable in the treatment of nervous and muscular affections.

I despair of enumerating all the improvements which have been effected in the various specialties into which the practice of medicine has become subdivided within these twenty or thirty years. The ophthalmoscope, the improved ear speculum, the rhinoscope, the laryngoscope — hold out their mirrors to enlighten us, or open their mouths to proclaim their own value. Diagnosis has reached a wonderful degree of accuracy; prognosis has become a terrible kind of second-sight which is not always handled carefully enough; treatment gains a little with every decade. The history of therapeutics records a succession of marches and counter-marches, with a slight onward movement as the total result of every completed revolution; slight, but precious to humanity.

I cannot pass over the most encouraging fact of the growth of medical libraries. We have a right to congratulate ourselves on the prosperity of that which has sprung into existence in this city within the last few years. It seems to me to mark the beginning of a new era in the medical history of the city. But what can I say of the immense library formed, but always forming, at Washington, and how can I sufficiently praise the work of Dr. Billings and his associates, one of the results of which comes before us in that colossal catalogue which is one of the best proofs of the advancing civilization of the great Republic?

It was time for the Medical School of Harvard University, — of that Institution of which Massachusetts must always be proud so long as she has anything to be proud of, — it was time for this school to plant its chief edifice in a fairer position, and erect it on a broader foundation than those with which it has been so long obliged to be contented. Let us not be ungrateful to the memory of our earlier

benefactors; to the State for the grant which proved of such value in its time; to the individuals who gave land and money when the former buildings were constructed. But the little Mason Street building was long ago outgrown, and that which succeeded it had in turn become wholly insufficient for the needs of the School.

You will pass from beneath this hospitable roof to the new edifice in which as we trust many successive generations of medical students are to receive a large part of their instruction. As you enter its doors, as you survey its halls and lecture-rooms, its laboratories and their appliances, some of you may be ready to exclaim, What! All this to teach a student to cut off a limb or administer a potion?

The question is a natural one, and the answer is easy. The Art of Healing is supported, advanced, illuminated, by the various kinds of knowledge which are recognized as belonging to the Science of Medicine. And the Science of Medicine, like all other kinds of classified knowledge, is best taught, most easily and thoroughly learned when taught systematically, because facts are most clearly perceived and most firmly retained in the memory when presented in their serial relations. The teaching of the various branches included in a complete medical course requires ample provision for its multiplied exigencies.

You will enter or look into more amphitheatres and lecture-rooms than you might have thought were called for. But if you knew what it is to lecture and be lectured to in a room just emptied of its preceding audience, you would be thankful that any arrangement should prevent such an evil. The experimental physiologists tell us that a bird will live under a bell glass until he has substituted a large amount of carbonic acid for oxygen in the air of the bell glass. But if another bird is taken from the open air and put in with the first, the new-comer speedily dies. So when the class I was lecturing to was sitting in an atmosphere once breathed already, after I have seen head after head gently declining and one pair of eyes after another emptying themselves of intelligence, I have said, inaudibly, with the considerate self-restraint of Musidora's rural lover, —

Sleep on, dear youth; this does not mean that you are indolent, or that I am dull; it is the partial coma of commencing asphyxia.

You will see extensive apartments destined for the practical study of chemistry and of physiology. But these branches are no longer studied as of old by merely listening to lectures. The student must himself perform the analyses which he used to hear about. He must not be poisoned at his work, and therefore he will require a spacious and well-ventilated room to work in. You read but the other day of the death of an esteemed fellow-citizen from inhaling the vapors of a broken demijohn of a corrosive acid. You will be glad to see that every precaution is taken to insure the safety and health of our students.

Physiology, as now studied, involves the use of much delicate and complex machinery. You may remember the balance at which Sanctorius sat at his meals, so that when he had taken in a certain number of ounces the lightened table and more heavily-weighted philosopher gently parted company. You have heard, perhaps, of Pettenkofer's chamber, by means of which all the living processes of a human body are made to declare the total consumption and product during a

given period. Food and fuel supplied; work done. Never was the human body as a machine so understood; never did it give such an account of itself as it now does in the legible hand-writing of the cardiograph, the sphygmograph, the myograph, and other self-registering contrivances, with all of which the student of to-day is expected to be practically familiar.

I do not see any room marked on the plan of the new building as intended especially for the use of the microscope. But that a proper apartment will be assigned to this use I feel assured. I have referred to the modern achromatic microscope as having created a new era in Medical Science. I have no time to tell what it has done for Anatomy, Physiology, and Pathology, besides its great services in other departments of knowledge. But to those who have never seen its miracles I can give an illustration which they will find it hard to believe I did not borrow from some new Gulliver's Travels or from some Jules Verne's imagination. Yet what I shall say is the simplest truth in the world to any microscopic expert, and may be easily verified by any sceptic.

If we had to examine the structure of a human body by the naked eye, — or as I will venture to call it, *gymnoscopic* or rather *gymnopic* inspection, — it would make a great difference whether our subject were of the natural dimensions or whether he were a Liliputian, or a Brobdingnagian. We should lose sight of many particulars in the structure of the Liliputian which we easily detect in a man of the natural size. We should find many things plain enough in the Brobdingnagian which we do not notice in the man of ordinary dimensions on account of their minuteness. Thus, for instance, we should find that man is shingled all over, or tiled, if you will — covered with scales, more literally, just as a serpent is. The statue of Liberty, the arm of which the cast in the square at New York has made familiar to us, the statue of Carlo Borromeo at Milan, that of Bavaria, or the new statue of Germania, any one of these changed to flesh and blood would be a great source of knowledge to a gymnopic anatomist. You will observe that the naturalist could examine only a small portion of one of these colossal figures at a time. Of course the same thing is true of the microscopic man I am going to describe. He must be examined in small fragmentary portions.

The individual from whom we will suppose the portion under examination to have been taken was, we will say, of short stature; a little more than five feet two inches in height and weighing one hundred and twenty pounds. Our microscope, a rather powerful, but not extraordinarily powerful one, magnifies a thousand diameters. This fragment, then, thus magnified, represents an individual just one mile in height. He would ten times overtop the loftiest of the pyramids; twenty times the tallest of our steeples. He could bestride our good city from Long Wharf to Charles Street. His breadth and thickness being in proportion to his height, his weight would be 120,000,000,000 (one hundred and twenty thousand million) pounds, equal to sixty million tons. He could take our State House up as we should lift a paving stone and fling it into the waters beyond Boston Lighthouse, — cleaning out that palace of the people by a summary process quicker than the prætorian bauds of Domitian or Commodus would have cleaned out a Roman Senate Chamber that dared to have an opinion of its own. Such is the microscopic man as we see him piecemeal in that won-

derful instrument. It is the telescope of the microcosm, — the master-key to the portals of a new universe, and the student must be carefully taught how to use it.

Among the various apartments destined to special uses one will be sure to rivet your attention; namely, the Anthropotomic Laboratory, known to plainer speech as the Dissecting Room. The most difficult work of a medical school is the proper teaching of practical anatomy. The pursuit of that vitally essential branch of professional knowledge has always been in the face of numerous obstacles. Superstition has arrayed all her hobgoblins against it. Popular prejudice has made the study embarrassing and even dangerous to those engaged in it. The surgical student was prohibited from obtaining the knowledge required in his profession and the surgeon was visited with crushing penalties for want of that necessary knowledge. Nothing is easier than to excite the odium of the ignorant against this branch of instruction and those who are engaged in it. It is the duty and interest of all intelligent members of the community to defend the anatomist and his place of labor against such appeals to ignorant passion as will interfere with this part of medical education, above all, against such inflammatory representations as may be expected to lead to mid-day mobs or midnight incendiarism.

The enlightened legislation of Massachusetts has long sanctioned the practice of dissection, and provided means for supplying the needs of anatomical instruction, which managed with decent privacy and discretion, have served the beneficent purpose intended by the wise and humane lawgivers without doing wrong to those natural sensibilities which are always to be respected.

During the long period in which I have been a Professor of Anatomy in this Medical School I have had abundant opportunities of knowing the zeal, the industry, the intelligence, the good order and propriety with which this practical department has been carried on. The labors superintended by the Demonstrator and his assistants are in their nature repulsive, and not free from risk of disease, though in both these respects modern chemistry has introduced great ameliorations. The student is breathing an air which unused senses would find insufferable. He has tasks to perform which the chambermaid and the stable-boy would shrink from undertaking. We cannot wonder that the sensitive Rousseau could not endure the atmosphere of the room in which he had begun a course of anatomical study. But we know that the great painters, Michel Angelo, Leonardo, Raphael, must have witnessed many careful dissections; and what they endured for art, our students can endure for science and humanity.

Among the large number of students who have worked in the department of which I am speaking during my long term of service, — nearly two thousand are on the catalogue as graduates, — there must have been some who were thoughtless, careless, unmindful of the proprieties. Something must be pardoned to the hardening effect of habit. Something must be forgiven to the light-heartedness of youth, which shows itself in scenes that would sadden and solemnize the unseasoned visitor. Even youthful womanhood has been known to forget itself in the midst of solemn surroundings. I well remember the complaint of Willis, a lover of the gentle sex, and not likely to have told a lie against a charming young person; — I quote from my rusty memory, but I believe correctly: —

She trifled! ay, that angel-maid,—
She trifled where the dead was laid.

Nor are older persons always so thoughtful and serious in the presence of mortality as it might be supposed they would show themselves. Some of us have encountered Congressional Committees attending the remains of distinguished functionaries to their distant place of burial. They generally bore up well under their bereavement. One might have expected to find them gathered in silent groups in the parlors of the Continental Hotel or the Brevoort House; to meet the grief-stricken members of the party smileless and sobbing as they sadly paced the corridors of Parker's, before they set off in a mournful and weeping procession. It was not so; Candor would have to confess that it was far otherwise; Charity would suggest that Curiosity should withdraw her eye from the key-hole; Humanity would try to excuse what she could not help witnessing; and a tear would fall from the blind eye of Oblivion and blot out their Hotel-bills forever.

You need not be surprised, then, if among this large number of young men there should have been now and then something to find fault with. Twice in the course of thirty-five years I have had occasion to rebuke the acts of individual students, once in the presence of the whole class, on the humane and manly sympathy of which I could always safely rely. I have been in the habit of considering myself at liberty to visit the department I am speaking of, though it had its own officers; I took a part in drawing up the original regulations which governed the methods of work; I have often found fault with individuals or small classes for a want of method and neatness which is too common in all such places. But in the face of all peccadillos and of the idle and baseless stories which have been circulated, I will say, as if from the chair which I no longer occupy, that the management of the difficult, delicate, and all-important branch committed to the care of a succession of laborious and conscientious Demonstrators, as I have known it through more than the third of a century, has been discreet, humane, faithful, and that the record of that department is most honorable to them and to the classes they have instructed.

But there are better things to think of and to speak of than the false and foolish stories to which we have been forced to listen. While the pitiable attempt has been making to excite the feelings of the ignorant against the School and the University, hundreds of sufferers throughout Christendom,—throughout civilization,—have been blessing the name of Boston and the Harvard Medical School as the source from which relief has reached them for one of the gravest injuries, and for one of the most distressing of human maladies. I witnessed many of the experiments by which the great surgeon who lately filled a chair in Harvard University has made the world his debtor. Those poor remains of mortality of which we have heard so much have been of more service to the human race than the souls once within them ever dreamed of conferring. Dr. Bigelow's repeated and searching investigations into the anatomy of the hip-joint showed him the band which formed the chief difficulty in reducing dislocations of the thigh. What Sir Astley Cooper and all the surgeons after him had failed to see, Dr. Bigelow detected. New rules for reduction of the dislocation were the consequence, and the terrible pulleys disappeared from the operating amphitheatre. Still more remarkable are the results obtained by Dr.

Bigelow in the saving of life and the lessening of suffering in the new method of operation for calculus. By the testimony of those renowned English surgeons, Sir Henry Thompson and Mr. Erichsen, by the award to Dr. Bigelow of a sexennial prize founded by the Marquis d'Argenteuil, and by general consent, this innovation is established as one of the great modern improvements in surgery. I saw the numerous and patient experiments by which that priceless improvement was effected, and I cannot stop to moan over a scrap of integument, said to have been made imperishable, when I remember that for every lifeless body which served for these experiments a hundred or a thousand living fellow-creatures have been saved from unutterable anguish, and many of them from premature death.

You will visit the noble hall soon to be filled with the collections left by the late Professor John Collins Warren, added to by other contributors, and to the care and increase of which the late Dr. John Jackson of precious memory gave many years of his always useful and laborious life. You may expect to find there a perfect golgotha of skulls, and a platoon of skeletons, open to the sight of all comers. You will find portions of every human organ. You will see bones softened by acid and tied in bow-knots; other bones burned until they are light as cork and whiter than ivory, yet still keeping their form; you will see sets of teeth from the stage of infancy to that of old age, and in every intermediate condition, exquisitely prepared and mounted; you will see preparations that once formed portions of living beings now carefully preserved to show their vessels and nerves; the organ of hearing exquisitely carved by French artists; you will find specimens of human integument, showing its constituent parts in different races; among the rest, that of the Ethiopian, with its cuticle or false skin, turned back to show that God gave him a true skin beneath it as white as our own. Some of these specimens are injected to shew their blood-vessels; some are preserved in alcohol; some are dried. There was formerly a small scrap, said to be human skin, which had been subjected to the tanning process, and which was not the least interesting of the series. I have not seen it for a good while, and it may have disappeared, as the cases might happen to be open while unscrupulous strangers were strolling through the Museum. If it has, the Curator will probably ask the next poor fellow who has his leg cut off for permission to have a portion of its integument turned into leather. He would not object, in all probability, especially if he were promised that a wallet for his pocket, or a slipper for his remaining foot, should be made from it.

There is no use in quarrelling with the specimens in a museum, because so many of them once formed a part of human beings. The British Government paid fifteen thousand pounds for the collection made by John Hunter, which is full of such relics. The Hunterian Museum is still a source of pride to every educated citizen of London. Our foreign visitors have already learned that the Warren Anatomical Museum is one of the sights worth seeing during their stay among us. Charles Dickens was greatly interested in looking through its treasures, and that intelligent and indefatigable hard worker, the Emperor of Brazil, inspected its wonders with as much curiosity as if he had been a Professor of Anatomy. May it ever remain sacred from harm in the noble hall of which it is about taking possession! If violence, excited by false

outcries, shall ever assail the treasure house of anthropology, we may tremble lest its next victim shall be the home of art, and, ignorant passions once aroused, the archives that hold the wealth of literature perish in a new Alexandrian conflagration. This is not a novel source of apprehension to the thoughtful. Education, religious, moral, intellectual, is the only safeguard against so fearful a future.

To one of the great interests of society, the education of those who are to be the guardians of its health, the stately edifice which opens its doors to us for the first time to-day is devoted. It is a lasting record of the spirit and confidence of the young men of the Medical Profession, who led their elders in the brave enterprise, an enduring proof of the liberality of the citizens of Boston and of friends beyond our narrow boundaries, a monument to the memory of those who, a hundred years ago, added a School of Medicine to our honored, cherished, revered University, and to all who have helped to sustain its usefulness and dignity through the century just completed.

It stands solid and four-square among the structures which are the pride of our New England Venice, — our beautiful metropolis, won by well-directed toil from the marshes and creeks and lagoons which were our inheritance from nature. The magnificent churches around it let in the sunshine through windows stained with the pictured legends of antiquity. The student of Nature is content with the white rays that show her just as she is; and if ever a building was full of light, — light from the north and the south; light from the east and the west; light from above, which the great concave mirror of sky pours down into it; this is such an edifice. The halls where Art teaches its lessons and those where the sister Sciences store their collections, the galleries that display the treasures of painting and sculpture, are close enough for agreeable companionship. It is probable that in due time the Public Library with its vast accumulations will be next-door neighbor to the new domicile of our old and venerated institution. And over all this region rise the tall landmarks which tell the dwellers in our streets and the traveller as he approaches that in the home of Science, Arts, and Letters the God of our Fathers is never forgotten, but that high above these shrines of earthly knowledge and beauty are lifted the towers and spires which are the symbols of human aspiration ever looking upward to Him, the Eternal, Immortal, Invisible.

SOME CASES OF HYSTERICAL AFFECTION OF VISION.¹

BY O. F. WADSWORTH, M. D.

THE four cases which I wish to report illustrate very different degrees and forms of visual disturbance. As the patients were all males, three boys and one adult, the cases also illustrate the fact, which ought not, indeed, to need illustration, but is perhaps not quite as generally recognized as it should be, that hysteria is by no means confined in its manifestations to the sex whose anatomical organization furnished the name. It is furthermore of interest that in three of these cases the only symptoms by which the affection was shown were such as were referred to the organ of

vision, while in the fourth case the ocular symptoms, though not the only, were yet the most prominent ones. Before we can venture to attempt anything like an exact explanation of the production of the phenomena observed in these, as in other cases, our knowledge of the nature and mechanism of hysteria must be far more advanced than it is at present.

In three of the cases the diagnosis was not difficult to make; in the remaining one, as will be seen, it was only through an unexpected accident that its nature was brought to light.

A boy of nine years of age, always well, not sensitive to pain, etc., as were some others of the family, while at school observed a blurring of the right eye, and felt as if the light troubled it. From that time he kept it shut and wore a bandage over it, but did not complain of pain, and answered questions as to pain rather indifferently. He went on at school for three or four days, using his left eye, and saying it did not hurt him to do so. In other respects he seemed perfectly well.

He was brought to me when the eye had been kept closed for six days. On removing the bandage there was no external sign of irritation, no appearance of spasmodic contraction of the orbicularis. He asserted, however, that he could not open the eye. By placing him in a shaded part of the room and proceeding slowly and carefully, it was possible to raise the lid without experiencing resistance, and while the lid was held open he was gradually encouraged to read the test types at the opposite side of the room. There was no congestion, the pupil reacted well, vision was $\frac{1}{3}$. He now allowed the lid to be held open while the eye was examined with oblique light, even once glancing round at the light during this process without showing any sensitiveness. Then he was able to hold the lid up himself while he underwent examination with the ophthalmoscope. This examination showed a normal fundus; but when it was over the lid drooped again over the eye. Further encouragement and the application of cold bathing to the lids for a few minutes enabled him to open the eye imperfectly, but in a hesitating way, as if he was still expecting some unpleasant result from the act. The condition was explained to the boy's father, and he went home with directions to use cold water bathing locally as needed. A few days later the father wrote that the eye was perfectly well.

A boy, eleven years of age, was brought to me from the western part of the State, July 1, 1880, with the following history: At four years of age he had scarlet fever, followed by general dropsy for some weeks, then pneumonia. After this there was digestive disturbance; for years he complained a little of stomach ache after two thirds of his meals. The last fall he had had a light attack of diphtheria, not followed by paralysis. After this again his digestion became worse; he had severe pain in the left hypochondrium, "so as to double him up," morning and night at about the same hour, and also occasionally during the day; he sometimes had nausea after food. His bowels were generally inclined to looseness, often he had a dejection after each meal. He improved on a diet mainly of meat and stale bread, and for the last three months had been much better and had little pain. The last summer he had complained for a time of pain in his eyes in the evening. Since the diphtheria he had complained of an ache in the eyes on reading, and if he did not stop the ache changed to a sharp pain. The eyes were never red.

¹ Read before the Boston Society for Medical Observation, October 1, 1883.

Sunlight and artificial light were troublesome. He had been kept from school all winter, and was much in the open air. He was now thin, but, his mother said, better in looks than for years, perhaps easily tired, but very active.

There was some slight roughness of the conjunctiva of the upper lids near the edge of the tarsus, not more than is often seen without special trouble. Vision of either eye was $\frac{1}{2}$. There was no insufficiency of the external muscles. In each eye the media and fundus were normal and refraction emmetropic. Without a glass he read .5 Snellen from 13" to 4", with +24 both farther and nearer, from 19" to 3 $\frac{1}{2}$ ". Even with these glasses, however, the eyes soon tired, sharp pain and blur came in a few minutes.

He was ordered citrate of quinine and iron; a collyrium of borax and camphor water; to read, with +24, three minutes three times daily, and to increase the time one minute each day. He returned home, and was to report progress.

July 6th his mother wrote that the day before, while celebrating the Fourth by the explosion of powder in a bottle, he had been burned, his hand cut, and his face speckled with powder; that the attending physician said the iris and pupil were not reached, but there were several grains of powder in the white of the eye.

September 21st his mother wrote again. For a week after the explosion he was unable to open his eyes at all, and was confined to a dark room nearly three weeks. As soon as the inflammation subsided he began to exercise the eyes as directed, "but to his utter astonishment and my own he found that he could read for an indefinite time without any of the painful sensations that he experienced before the accident, and he has now commenced school, and can even study in the evening (when before he could not even bear to sit in a room with a bright light), and his eyes are not at all affected unless when he becomes very tired and nervous, and then there is a slight ache." She added that I should have hardly prescribed such a blowing up as treatment, but that it had proved very effective.

Mr. —, aged thirty-four, employed in an importing house, in a position in which he had charge of a considerable correspondence, applied to me October 26, 1875, and gave the following history: During the winter of 1863 and 1864 he had malarial fever. In 1868 and 1869 he lived in New Jersey, and suffered from what he called "dumb ague," described as "a slight fever following an unpleasant feeling inside." Lately, on damp evenings, he had experienced a similar feeling while driving from the city to his home in the suburbs, and for this he was taking quinine in tonic doses. He was subject to headaches, chiefly about the brows; these he said were of three kinds, though all felt about the same, (1) those caused by use of the eyes; (2) "neuralgic," excited by an east wind, and generally to be warded off by a dose of guarana; (3) from the stomach, relieved by a Seidlitz powder. For the last year or two the heat of the sun had affected him much, and even so late in the season as the last part of October he could not walk in the sun without an unpleasant feeling in his head. He was thin and pale, but this was his usual habit.

His ocular symptoms were peculiar. For fifteen years he had known he was near-sighted. For nine years he had been unable to use his eyes in the evening. If he read in the evening he generally had a

headache the next morning, which lasted throughout the day. He was fond of music, but if he was exposed to bright light at a concert or assembly he had a headache the next morning but one, and for this reason he had for a long time refrained from such recreation. The last four years he had been unable to read print even in the daytime; reading print for only a few minutes caused headache, yet he could write and read writing without inconvenience; to read through a large foreign mail gave him no trouble.

It was evident from his statements alone that imagination must play an important part in the production of the symptoms.

The eyes were externally normal, and throughout their examination showed no special sensitiveness to light. Vision in the right eye, with -36, was $\frac{1}{2}$; in the left, with -24, $\frac{1}{2}$ to $\frac{1}{2}$. He read, without glasses, Snellen 1 $\frac{1}{2}$ at 22" and up to 7 $\frac{1}{2}$ "; with the refraction equalized by placing -72 before the left eye the print appeared clearer. There was no insufficiency of the muscles at 15". The fundus of both eyes was normal.

He was encouraged that his disability could be removed, and advised to continue the quinine, and to take moderate exercise. Glasses to correct his myopia were to be worn except while at work, and for reading and writing he was to wear a plane glass right, -72 left. He was directed to read print for five minutes three times daily, always at the same hour, to increase the time of reading one minute each day, and to report in ten days.

November 6th he returned, bringing with him a memorandum of the time and amount of the reading done each day, with careful notes of his sensations. I regret that these memoranda have been lost or mislaid so that I am unable to give them verbatim. He had had several times dull pain in the brow after reading, and had omitted reading several times from dread of increasing this pain. He was again encouraged, told to begin now with seven minutes' reading, and to increase gradually as before. He was to persist in the readings without regard to the headache, and on no account to interrupt them without reporting to me immediately; in any case to return in a week.

This time he followed out the directions thoroughly, and it was interesting to observe from his memoranda how carefully he had watched his symptoms, and how, as he became convinced they were not serious, the headache first did not increase with continuance of the reading, then ceased altogether. His progress was now steady and uninterrupted; after a while he was allowed to increase the length of his reading more rapidly, and ten weeks from the time of his first visit he was dismissed from treatment, being able to read as he pleased, in the evening as well as in the daytime, and having attended an oratorio at the Music Hall without any subsequent discomfort. I have seen him at intervals since then, and there has been no relapse.

William C., aged twelve, came to the Out-Patient Department of the Massachusetts General Hospital January 3, 1879. He was the tenth of a family of eleven children, of whom six were living. According to the mother's statement four had died of phthisis and one of brain disease, all below the age of three years. An older sister had been under the care of Dr. J. J. Putnam with hysterical symptoms. The boy's own history was as follows: About two years before

he apparently began to grow very near-sighted. This was first noticed by his teacher at school, and it had reached such a degree that he held his book so near his face that what he read could not be understood. He even stated that he could not see to read unless his nose actually touched the paper. With the near-sightedness there had come a marked change in his temperament. While he was formerly tractable, and his earlier teachers remembered him as a good boy, he had in the last two years become obstinate and troublesome. He continued at school till the last fall; then had a "row" with the teacher, and ran out of the school. For a year his appetite had been failing. For the past three months vomiting had been a prominent symptom, occurring nearly every other day before breakfast, and he was never able to eat his breakfast until he had been out into the air. At one time, three or four weeks before I saw him, he had gone two days without food. Of late he had had bad dreams; that he was being killed, etc. He was waked every morning at three or four o'clock by a sharp pain in his eyes. He said that his sight was worse at night, and that one reason why he did not wish to go to school was that other boys called him "blind" in the evening, and also "color-blind." His sister stated that he stumbled over objects at home, where he was familiar with the locality, as if he did not see them, yet he always wanted a hat with a broad brim to protect his eyes.

He was of good height for his age, but slightly built, pale and anæmic in appearance, thin in flesh, his manner somewhat apathetic. The eyes were externally normal; the pupils reacted well. With the right eye he read X at 2' to 2½'; with the left eye XII at the same distance. No glasses improved his vision. There was no abnormal decrease of vision when the light was diminished. With the right eye he distinguished green, red, pink, and blue, but could not tell yellow. With the left eye he recognized red, pink, and blue, but neither green nor yellow. A few minutes later he told yellow, as well as the other colors, with the right eye; still neither green nor yellow with the left.

The field of vision was much and concentrically contracted; it extended nearly equally in all directions from the fixation point, having at the distance of a foot a diameter of 6" to 6½"; it was very nearly alike in the two eyes. The ophthalmoscope showed the refraction to be emmetropic, the media clear, the fundus everywhere quite normal in appearance. Even when the pupils were dilated by atropine careful examination detected no anomaly. This condition, a perfectly normal fundus, was repeatedly found so long as the case was under observation.

Cod-liver oil was prescribed, and general hygienic directions given.

January 7th his sister reported that before taking the cod-liver oil he would say there was a fish in the tumbler, and insist upon rinsing it repeatedly. His vision was not as good as on the 3d; he now read VIII at 10" with difficulty. The field of vision also was smaller, averaging about 3" at a distance of one foot. It was also measured at a distance of three feet, and the results corresponded fairly well.

January 14th he read IV at 7"; told all colors with either eye, but required several seconds to recognize them. The field of vision, tested by the moving hand while the eye of the observer served as the object of fixation, seemed a little smaller than on the 7th.

January 21st pills of sulphate of strychnia, one

twelfth grain three times a day, were ordered, but as he showed the physiological effect after taking the second pill they were reduced to two per diem.

January 23d he told all colors at 1', but could recognize none at 2', even against a white background.

January 30th the field of vision, measured on the blackboard, was only 2" in diameter at 1'. When he fixed my eye while I moved my hand slowly toward the line of vision, giving it at the same time a constant lateral motion, the hand often reached or even crossed the line of vision before he admitted that he saw it. This phenomenon was observed several times at later dates, and he sometimes even asserted that he could not see the hand when it was kept in motion in a position directly between his eye and mine. The strychnia was now omitted and iron given.

By March 20th the boy's color was improved. His vision the same.

April 24th he had a fair color, and his general appearance was better; his sister said he had never looked so well. He read III at 7"; his field of vision was 3" in diameter at 1'; he told colors correctly at 2'. Though measurement on the blackboard showed so contracted a field, it was noticed while testing his color sense that when a bit of colored paper fell from my hand to the ground, the hand being at the time much outside the asserted field, the boy's eyes turned down to follow the paper, as if the size of the field were normal.

He continued the iron and cod-liver oil till June, and then went into the country, where he stayed till September. At the end of September he stated that he had improved in sight and in general condition, but still was troubled by night-blindness. He had a scar across his nose, the result of a fall over something in the dark, and by his sister's statement he fell in the dark frequently. He told letters of VIII at 12" with difficulty, soon after at 18". The field, at 1', had a diameter of 6" to 8" in either eye.

He was lost sight of till July, 1880, when he came on account of a slight conjunctivitis. He was said to have improved in general health, but in other respects to have changed little. His field of vision, tested with the hand, was only 1" to 2" in diameter. Yet he had now for six weeks been serving as a messenger boy in a district telegraph office, liked the employment, and found no difficulty in going about. In fact, from the first, whenever he was under my observation he had shown plainly from the manner in which he moved about that no very great actual contraction of the field could exist. How much of the simulation was conscious, how much unconscious, it is difficult to say.

About a year later I met the boy in the street; he had grown, and looked in good health; he told me that his sight had become normal in all respects.

A SUCCESSFUL CASE OF TETANUS NEONATORUM TREATED WITH BROMIDE OF POTASSIUM.

BY L. EMMETT HOLT, A. M., M. D., NEW YORK,

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RECOVERY in cases of tetanus of the newly born is rare. Bad as the prognosis of this disease is in adult life, it is even worse in the young child. The most frequent cause of death at all ages being exhaustion, it

is easy to see why the child of a few days readily succumbs.

The earlier writers upon tetanus neonatorum held it to be absolutely fatal. More recent ones hold out but little encouragement from their experience in its management. Thus Vogel lost all of his cases. Of twenty-four observed by Finkh none survived. In Stockholm, where the disease is very common, Cederchjoeld saw forty-four cases with but two recoveries. Every one of one hundred and eighty-five cases occurring on the Island of Heimacy about the beginning of this century died. Dr. J. Lewis Smith in his excellent article on this subject in the last edition of his *Diseases of Children* states that only one instance of recovery has come under his observation; though he mentions eight cases collected from various sources.

Among the negro children at the South the disease was formerly very prevalent, and Nailer¹ says that it was so uniformly fatal that a physician was never called.

The following case is published, not with the idea of proposing bromide of potassium as a specific for the disease, but as furnishing an instance of very prompt and very decided improvement under its use, and also illustrating the remarkable tolerance of this drug in young infants.

Katie M., aged seventeen days, was brought to the dispensary by the mother September 27, 1882. She gave the following history: 'The child was born at full term, the labor being very easy, and of only two or three hours' duration. The cord fell off on the fourth day, but the umbilicus has not yet quite healed. There had been no hæmorrhage from this source. Except this condition of the umbilicus, and quite a severe eczema which had developed about the genitals and inner surfaces of the thighs, nothing abnormal had been observed about the child until it was twelve days old. Then the mother noticed that it would occasionally straighten back while nursing and become very rigid for a few moments. Sometimes it would get black in the face at these attacks. Soon after it was seen to open the mouth with difficulty and not to the full extent. Since that time these paroxysms had become gradually more frequent and more severe, and even between them the body was very stiff. Nursing had become impossible, and the child had been fed with a spoon for four days. Urine and bowels were reported regular. There had been no fever noticed. The hygienic surroundings, it was afterwards learned, were about as unfavorable as they could well be in a tenement house, though the child showed no evidence of neglect in its person.

On examination I found a tolerably well-nourished child. It lay upon the back, the body being slightly arched in opisthotonos. The upper extremities could be moved somewhat, though the fingers were tightly flexed and the thumbs held between the first and middle fingers on each side. The lower extremities were almost completely extended and perfectly rigid, no motion being allowed at hips or knees. The skin was loose and flabby, and the hard contracted muscles beneath gave the limbs a peculiar feeling. There was an eczema over thighs, genitals, and lower part of abdomen, for the most part dry, but in places still exuding moisture. The whole integument of this region was greatly reddened. The umbilicus itself was a little pouting, and presented a small excoriated surface, hardly amounting to an ulcer. There was no sign of

suppuration. The face presented a singular aspect; the muscles of the jaws stood out rigidly. The jaws could be separated barely enough to admit the little finger between the gums. The eyes were closed and lips pouting.

The child cried with a low whine much of the time. Every few minutes a paroxysm would come on; then the muscles of the face became more rigid, the respiration ceased for the time, the face was cyanotic, and the extremities even more rigid than before. This passed off in a few moments, and nothing but the tonic rigidity remained, but this was enough to enable the child to be balanced upon the hand like a piece of wood. Rectal temperature 99½° F.

Ordered ten drops of brandy every two hours, and potass. bromid., four grains, every three hours; the umbilicus to be dressed with simple cerate.

September 28th. By mistake double the dose of bromide was given each time, but as the child seems to have suffered no bad effects the larger doses are ordered to be continued. The breast milk, given with a spoon, was taken well and retained, as was also the brandy. Condition about the same as yesterday.

September 29th. There is decided improvement in the symptoms. The medicine has been given regularly night and day. There is not so much rigidity of the lower extremities, and the mouth can be opened a little better. The cry is stronger. The child nursed three or four times during the past night, this being the first time for a week. The bowels are a little loose, and vomiting took place once to-day. The child sleeps most of the time. Rectal temperature 99¾° F. The treatment is continued. The umbilicus has been dressed with ungt. zinc. oxidi. It is healing.

September 30th. Nurses so well that hand feeding is discontinued. Has been more restless and worrying a good deal to-day, but the paroxysms are not so frequent. Temperature 99¼° F.

October 2d. The umbilicus has about healed. Has slept most of the past twenty-four hours, and during this time has been almost completely relaxed. The rigidity has almost gone. Temperature 101¼° F. The bromide is reduced to five grains every three hours. Brandy continued as before.

October 3d. Only a few mild paroxysms during the night, but high fever is reported to have been present. Temperature 100¾° F.

October 4th. The child is not quite so well to-day. The paroxysms have become more frequent and more severe than for several days. It has scarcely slept at all. Quite a severe paroxysm is witnessed to-day; this is almost as marked as at any time during the disease. Relaxation in the interval seems complete, however. Bromide again increased to first doses of eight grains every three hours.

October 5th. A few mild paroxysms between two and four this morning, otherwise quiet.

October 18th. No paroxysms have occurred since the 5th instant. The bromide has been gradually diminished, and is now stopped altogether. The child is gaining flesh, and the eczema is very much alleviated. A small hernia has formed at the umbilicus, but otherwise everything here is normal.

Discharged cured.

February 10, 1883. I saw the child to-day, and learned there had been no further manifestations of the disease since it was dismissed from treatment.

Remarks. I have before me notes of fifteen other

¹ New Orleans Medical Journal, 1846.

cases of recovery from tetanus neonatorum, reports of which I have found scattered through medical literature. The following are the methods of treatment so far as they have been given: "Castor oil and local sedatives;" quinine and morphia endermically, nothing by the mouth; Cannabis Indica in full doses, that is, one half ounce of the tincture per diem; ipecac and quinine in small and frequent doses; atropia hypodermically; sulphate of zinc in five-grain doses every three hours, and "a little opium;" chloral in doses of one grain or two grains four or five times a day; postural treatment alone, no medication.

From this array of facts it is evident that we must not be too ready to draw conclusions with regard to the action of drugs in this disease. Hasty conclusions from insufficient data are among the most serious obstacles to progress in therapeutics. We Americans are especially open to this charge.

It seems to us that we may divide the cases of tetanus into three groups:—

(1.) Those acute severe cases which prove fatal in from one to three days in spite of all treatment. This class includes, unfortunately, the great majority of the cases.

(2.) The very mild ones, which tend to a spontaneous recovery. In this class, it would seem from the histories, that several of the fifteen cases referred to belong.

(3.) Those which are less acute than the first series, but still severe, in which recovery seems to be due to the treatment employed.

We should class our own case among the last mentioned.

Up to the beginning of the treatment the case had been growing steadily worse. Eight grains of the bromide were taken every three hours, night and day, for five days. Inside of thirty-six hours there was such improvement that the child took the breast for the first time in a week. At the end of five days, when the child was so much better that the dose was reduced, a decided exacerbation in the symptoms followed, which lasted until the larger doses were resumed.

The brandy, no doubt, contributed to the favorable result, and is to be advised as an accessory to all modes of treatment.

The view advocated by Dr. Marion Sims in 1846, that this form of tetanus is frequently, if not always, due to pressure from displaced cranial bones, has not been sustained by subsequent experience. Latterly almost all forms of treatment have been abandoned except that by motor depressants of the spinal cord. Among these drugs chloral undoubtedly holds the first place in the minds of the majority of observers. Any drug to be of service must be pushed to its full physiological effect. Since this principle has been appreciated recoveries in tetanus have multiplied quite rapidly.

That the bromides are safer than chloral needs no argument here. This case shows that they are tolerated in young infants to a remarkable degree. I have been unable to find that they have ever been thoroughly tried in tetanus neonatorum in the doses indicated.

This case is submitted with the hope that others may be led to test the drug in future cases to see whether after all we have not in the bromide of potassium a remedy fully as efficient as chloral, and much safer.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

NOVEMBER 11, 1882. DR. MINOT read a paper on the

HYGIENE OF THE LYING-IN ROOM.¹

DR. INGALLS remarked upon the impossibility, in many cases, of carrying out the regulations proposed by Dr. Minot, admirable and clearly stated as they are. It was important, no doubt, that the room, etc., *should* be so arranged, but in what proportion of cases *could* it be done? The moment the physician began to propose this beneficial arrangement he was met by the statement "Well, I'll do the best I can," and this means that many of the behests are looked upon as unnecessary, therefore unattempted.

DR. MORRILL WYMAN remarked that the slip of board placed on the inside of the sash (not under it), and held by the window frame, so that it can turn on one of its long sides, gives an upward or downward direction to the incoming air, and prevents direct draughts, while the amount of air is controlled by raising or lowering the sash outside the board. It can be fitted to the bottom or top of the window, when both sashes are movable, as they ought always to be in a sick room.

Change of clothing, the introduction of fresh air and sunlight, he said, had more effect in securing the results of disinfection of a sick room than the diffusion of carbolic-acid vapor.

According to the investigations of Sternberg, carbolic acid was of no use as a disinfectant (except as occasioning a free use of water) unless used with caustic strength.

DR. J. STEDMAN reported, in connection with this subject, a case illustrating the necessity of the arrangements suggested by Dr. Minot. The patient had hired a large house for the summer. As the patient had chronic trouble with the kidneys and her general health was not good, the precaution was taken to investigate the plumbing, and a leak was found in the bath-room. This room opened into the dressing room, and that into the lying-in room. It was further found that the main soil-pipe was of lead and completely honeycombed, and the connections so broken that the foul air from the cess-pool had complete access to the lying-in room. The necessary repairs were made, and the patient was confined at term and did well.

The following year a student at the Harvard Medical School occupied a room over a brick drain in another part of the same house, and had typhoid fever, with severe hæmorrhage, and died in consequence.

Dr. Stedman further reported the case of a lady living in a modern house, whom he attended in confinement. She was delivered without accident. Dr. Stedman noticed that the bath-room door opened into the patient's bed-room, and accordingly had the door locked and the key put away. At the end of a week the patient had a severe chill, with copious vomiting of dark grumous blood, and in three days she died. She had been seen by Dr. Ellis in consultation, and on the same day an investigation showed that the sewerage was very defective, that the pipes from this and the

¹ See page 343, JOURNAL of October 11, 1883.

adjoining house joined at a distance of twenty feet, the common duct leading to a cess-pool ten feet in diameter made in the solid rock, and furnished with a cover which was sealed on. Thus resulted a pneumatic apparatus, the effect of which was that when sewage was let on from one house the air of the cess-pool was driven up into the other house, and *vice versa*; and there was, what was worse, a hopper in each cellar for the servants. The landlord refused to believe that the condition of the drainage was the cause of the lady's sickness, but the Board of Health ordered communications to be made with the common sewer.

DR. GREEN reported a case occurring during the past summer which illustrated the difficulty of getting patients to do as they should. This patient was a primipara who had not been in very good condition throughout her pregnancy. She had the choice of all the rooms in the house, but could not be prevailed upon to take one down-stairs, but insisted upon being at the top of the house in a chamber where there was a set bowl which was not even trapped. Thus there were three adverse factors in the case: the previous poor condition, an unwillingness to follow good advice as to taking care of herself, and the untrapped set bowl. She had a tolerably serious labor, and was delivered by forceps, escaping perineal laceration. Twenty-eight hours after labor she had a chill, followed by a temperature of 103° F., and rapidly developed symptoms of septicæmia, of which she died on the eighth day.

DR. GREEN spoke of the imperfect means by which, in most city houses, cold air is supplied to the furnace as a not improbable cause of zymotic disease. The cold-air box, he said, is commonly constructed of wood, runs beneath the basement floor through a sub-cellar three or four feet deep, and opens at, or just below, the surface of the ground. Even if the outer opening of the box is covered with a proper grating so that cats cannot enter, the wooden box is often gnawed into by rats, which sometimes die there. Moreover, the holes thus made afford ingress to the air of the sub-cellar, which may be more or less noxious either from a defect in the house drain which traverses the cellar, or from the broken and leaky drain of a neighboring house. The air, too, which enters the box from without near the level of the ground is liable to be contaminated with effluvia from cats and garbage barrels in the back yard, or from the top-dressing commonly placed on the grass plat at the front of the house. This impure air thus introduced to the furnace is thoroughly heated, a condition well adapted for the development of any germs contained in it, and then distributed to the living and sleeping rooms.

Every room, especially, as Dr. Minot has said, the lying-in room, should have an open fire both to heat and to ventilate it, but it is usually necessary to supplement the open fire with furnace-heated air, and that this may be as pure as possible the following conditions are essential:—

(1.) The cold-air conductor should be made of galvanized iron or of glazed drain pipe of large diameter.

(2.) After emerging from the house wall the conductor should be built up fifteen feet or sufficiently high to receive unobstructed currents of air. There should be properly grated openings on three sides near the top, and a suitable damper to regulate the entrance of air.

(3.) The sub-cellar should be ventilated by means of a large pipe opening into a hot chimney flue.

DR. MINOT thought that ventilation of a soil pipe into a chimney was very objectionable. Although there might always be an upward draught while the chimney was warm, yet when the chimney was cold there would probably be a downward draught. He alluded to a case which he had lately seen, in which the ventilating pipe was introduced into the flue of the parlor fire-place. A suspicious odor led to an examination of the drainage, and on applying the usual test the parlor was filled with the smell of peppermint.

PLACENTA PRÆVIA WITH CHRONIC BRIGHT'S DISEASE.

A case in the practice of Dr. S. T. Harmon, of Boston, reported by him, and read by Dr. INGALLS.

R. S. G., aged thirty-three, multipara, had first symptoms of kidney trouble four years ago. During the pregnancy under consideration everything went well up to the night of October 4, 1882, which was about the end of the eighth month, when she was suddenly awakened from a sound sleep by blood running down her thighs.

Dr. H. was called at one P. M., and found the patient cold and faint, with rapid pulse, etc.; no labor pains; the os was reached with great difficulty; it was open to the size of a twenty cent piece, and the placenta was attached so as to half cover the circle; the hæmorrhage was slight at this time.

By external manipulation and palpation a diagnosis of pelvic presentation was made, and at four A. M., 4th October, Dr. William Ingalls saw the case and advised the insertion of a large tampon, to be removed in six hours, and changed *pro re nata*; and also enjoined quietude and watchfulness on the part of the attendants. Patient was kept quietly in bed, opium given moderately, and tampons changed; this plan of treatment was followed for three days, and in the afternoon of the third day, October 7th, the tampon was removed.

About midnight of the same day the patient had another accession of flooding, together with labor pains, but upon investigation it was concluded that the membranes had ruptured, the liquor amnii had escaped, and that the loss of blood at this hæmorrhage had been slight.

Dr. Ingalls saw the case again, and dilatation and delivery were determined on.

Dr. Ingalls began with ether shortly after three A. M., about seventy-four hours after first flowing, and it was many minutes before the patient was fairly under its influence. The speaker removed the tampon, there being considerable hæmorrhage at this time, and introduced his hand into the vagina. The head presented. The cervix was dilated manually, and in a short time the hand could be introduced into the uterus. At this time Dr. Ingalls completed the dilatation to the size of his closed fist, turned the child, and delivered at about 3.45 o'clock A. M. The child was revived after some difficulty. He was well developed. The placenta was expressed shortly afterwards, and ergotine given subcutaneously. There was little or no hæmorrhage at this time. Patient did very well save for troublesome after-pains, which lasted about three days. The child had temporary paralysis of the left arm for nearly two weeks, but is now well and healthy in all respects. The mother resumed household duties in two weeks.

At the time labor came on the patient was troubled with dizziness, nausea, with occasional vomiting, and considerable diarrhoea. The eyelids were puffy, and

legs œdematous. The urine had one per cent. of albumen, hyaline, fine and coarse granular casts, etc.

DR. SINCLAIR said he thought the case was admirably conducted, but that for himself he would have delivered the patient then and there without waiting for a worse condition.

DR. RICHARDSON believed that the only way to treat the case was by immediate delivery; that it was safer to do the operation at once when the patient was in good condition. Upon this plan, and by a method previously detailed, he had had eleven cases, in all of which the patients had lived. In the last number of the *American Journal of Obstetrics* is an abstract of an article by a German author, who had saved a large proportion of cases by this method.

DR. TOWNSEND asked Dr. Richardson what course he would take in the case of a patient in the sixth or seventh month of pregnancy with hæmorrhages, sometimes a pretty alarming one.

DR. RICHARDSON replied that he would first make up his mind as to a diagnosis if the case were not earlier than the seventh month. At the sixth month it might not be possible.

DR. DOE stated that, as regards early hæmorrhage, he had the day before attended in her first confinement a lady, thirty-eight years of age, who last July had had hæmorrhage, and her physician in the country had diagnosed placenta prævia. In August the result of examination was unsatisfactory, but it was thought that on the right side of the cervix the placenta could be felt. From that time occasional hæmorrhage recurred. Ten days ago it could be ascertained that the placenta was lying close up to the os, but not overlapping it. Labor set in with spontaneous rupture of the membranes, and an examination soon after showed the head to be pressing firmly down upon the internal os. There was no undue hæmorrhage throughout the labor. The cervix dilated easily, but the labor had to be completed by forceps, on account of inefficient expulsive pains.

DR. RICHARDSON said his remarks were hardly intended to apply to a case like that reported by Dr. Doe, where the attachment was marginal.

DR. RICHARDSON said that he was called in consultation to see a lady who had been suddenly taken with flowing. The placenta was wholly over the os, which in the course of an hour had dilated from a condition which would admit only the tip of the finger to the size of a silver dollar. He stated to the attending physician that he would have no objection to putting in a tampon provided the patient were carefully watched. About twenty-four hours later he was called again, and was met by the statement that the tampon had prevented any further loss of blood, but upon looking at the patient it was evident that she was dying from internal hæmorrhage. The os was found fully dilated, and the patient was at once delivered by version, but soon died of exhaustion from the internal hæmorrhage. The child was of course dead. In this case the patient should have been delivered at once, or if the tampon had been applied the woman should have been unceasingly watched for evidences of internal hæmorrhage. In reply to remarks by Dr. Reynolds, Dr. Richardson stated that if one had a case of placenta prævia and the child were viable it was impossible to foretell the occurrence of a hæmorrhage which might end the case. In an instance cited first there was almost no hæmorrhage, then occurred a tremendous flow, and the woman was

considered dead. The heart, however, had not ceased to beat; the patient was rapidly delivered by version, and she recovered. Dr. Richardson did not think alarming hæmorrhage from placenta prævia was likely to occur before the child was viable, — say before the seventh month.

DR. SINCLAIR recalled one case of dangerous hæmorrhage at the fifth month, the patient flowing so that it was found necessary to deliver her. The uterus was found to contain twins. The circumstances of the case may have been due to the fact that the uterus was considerably larger than it would have been with a single fœtus.

PSEUDO-MEMBRANOUS ENTERITIS.

DR. BOARDMAN asked an opinion as to the conditions under which pseudo-membranous enteritis occurred. He referred to several cases once reported to the Society for Medical Observation by Dr. Goss, in the discussion following which Dr. Boardman had made the observation that the condition was never found except in hysterical subjects, but that the origin of the phenomenon had never been explained. Since these cases had been reported he had had two examples, one in a married woman, thirty-five years old, the subject of chronic hysteria. Dr. Boardman had expressed the belief to her that after the menopause the symptoms would disappear. The other case, however, was that of a woman fifty years old, who has been under the care of a number of physicians for a period of fifteen years. She now has, and, according to her report, has had for a number of years, this pseudo-membranous discharge from the bowels. She was said to have had uterine prolapse, inflamed and enlarged ovaries, some trouble with the coccyx, etc., and her husband had been consulted at different times as to the removal of the ovaries, the coccyx, etc. She had had her perineum sewed up, and the operation was followed by phlebitis in the left leg. Pressure upon the left ovary, which can readily be felt, is borne without pain. The right ovary has atrophied. The only disease is the hysterical condition, with some debility and anæmia, and the abnormal product of the bowels. Dr. Boardman exhibited to the Society a specimen of the discharge from this patient.

HOOR-GLASS CONTRACTION OF THE UTERUS.

DR. J. STEDMAN said that he had seen two or three examples of this condition, one of which was that of a woman to whom he had been called in consultation, the placenta not having come away. Two fingers were passed through the internal os, and after some time there was encountered a central uterine constriction, which, after a dilatation for about an hour and a half, allowed the hand to pass and seize the placenta, when the hand, placenta and all, were expelled by the uterine contractions. The constricting ring instead of being circular was transversely elliptical, and the uterus itself was very movable and hard to fix. Some, but not alarming, hæmorrhage occurred. It was not deemed wise to put the patient under ether, but she bore the operation remarkably, and has since done well.

DR. RICHARDSON said he believed that anæsthetics greatly predisposed to hæmorrhage. The only hæmorrhages that he had ever seen had followed the use of ether.

DR. SINCLAIR said he had declared more than eight-

een years ago that the use of ether predisposed to hæmorrhage.

DR. MINOT stated that the only fatal case of post-partum hæmorrhage he had ever had in his own practice was that of a patient who had taken no ether or other anæsthetic.

DR. RICHARDSON detailed two cases of hæmorrhage in Dublin, following the use of chloroform.

DR. WYMAN [not Lyman] asked if it were not an accepted fact that full etherization usually diminishes the force of the uterine contractions, and if so should it not be used with caution in cases where uterine hæmorrhage is feared?

DR. RICHARDSON, having some reference to remarks just made by Dr. Reynolds, asked if Dr. Reynolds would give ether to the nagging pains in the first stage, and spoke of the extraordinary value of chloral hydrate, given in doses of fifteen grains every twenty minutes, till forty-five grains had been taken, in relieving the pains of the first stage, and with such regularity that the administration had become almost a routine practice at the Boston Lying-in Hospital as well as in his own private practice. In regard to ether, the principle was that, as already suggested by Dr. Wyman, by diminishing the force of uterine contraction it increased the danger of hæmorrhage.

DR. BOARDMAN stated that, given in the usual manner, he had found ether to exert a favorable influence upon the progress of the case. He thought, too, there might be a fallacy in the reasoning of Dr. Richardson, in that his opinion was based upon cases in which some operative measures were required, when the hæmorrhage might have been due, either to the operation alone or to the customary deep anæsthesia, or to both combined.

MASSACHUSETTS MEDICAL SOCIETY.

COUNCILORS' MEETING.

THE fall meeting of the Councilors was held at the Medical Library, Boston, on Wednesday, October 3, 1883. The meeting was called to order at eleven A. M. by the President, Dr. Alfred Hosmer.

DELEGATES, ETC.

Delegates were appointed to the meetings of the State Medical Societies of Vermont and New York. To the former, Drs. Goldard, of Orange, and Driver, of Cambridge; to the latter, Drs. Crowell, of Haverhill, and Babbitt, of North Adams.

Dues were remitted to several Fellows, in accordance with the recommendation of the Committee on Finance, and other Fellows were allowed to resign, retire, or were dropped from the roll, as recommended by the Committee on Membership and Resignations.

REPORT ON SPECIAL MEETINGS OF BOARDS OF CENSORS.

Dr. E. H. Bradford, for the committee appointed at the annual meeting to consider the petition from the General Censors' meeting, that the various Boards of Censors might be allowed to hold special meetings at their pleasure, presented the following report, which was accepted by the Council:—

The committee find in the Revised Statutes of Mas-

sachusetts, Part I., Chap. XXII., Sect. 3, the following:—

"The meetings of the Censors shall be held in those districts respectively, in such places and at such stated periods as the Councilors of the Society may direct."

Also, in the By-laws of the Society, 1881, XX., line 8:—

"The Censors shall meet as hereinafter designated, or at such times as the Councilors may direct."

Also in the Digest of the Acts of the Commonwealth relating to the Massachusetts Medical Society, XIX.:—

"The Censors elected by the District Societies for the purpose of examining candidates shall, at least three of them, be convened in Boston on the Thursday next preceding the annual meeting of the general Society, and at such other times and places as the By-laws shall direct."

The committee find no prohibition of special meetings other than those designated, but such meetings would be manifestly informal or illegal, as authority is granted to no one to call such meetings, and the chairman of a Board of Censors who should summon the Board at other times than those designated would be in the position of a speaker of the House who should, on his own responsibility, attempt to convene the House at an irregular time. This, however, does not prevent special meetings of the individual Censors to consult as often as they may deem fitting, such meetings being analogous to conferences or meetings of committees, and not official, or for the transaction of official business.

The committee further do not find that it is advisable to ask the Councilors to appoint other times for the stated meetings than those already specified; for in By-law XX., lines 25-27, it is expressly stated as follows:—

"Any meeting of Censors, whether a quorum be present or not, may be continued by adjournment to such time, and place within the district, as may be determined upon by the Censors present."

If, therefore, the stated meetings as prescribed are insufficient in number, or occur at such times as may not be for the best interest of the District Society, it is within the power of the Censors of said Society to adjourn to such a time and as frequently as they may deem necessary. Meetings at irregular times, to accommodate individuals, are liable to cause confusion and are not advisable.

Farther legislation on the subject seems, therefore, unnecessary.

After various matters of incidental business the meeting adjourned.

Recent Literature.

Du Diagnostic de l'Ectopie Rénale. Par le DR. FRÉDÉRIC BEVRET, Ancien Interne Provisoire des Hôpitaux de Paris. (Publications du Progrès Médical.) Paris. Aux Bureaux du Progrès Médical, 6 Rue des Écoles. A. Delahaye and E. Lecronier, Editeurs, Place de l'École de Médecine. 94 pages.

This little book considers the movable kidney from the point of diagnosis alone, and chiefly the differential diagnosis. It contains many, and is chiefly made up of, cases in which the symptoms caused by a displaced kidney have led to an erroneous diagnosis.

Medical and Surgical Journal.

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THE DEDICATION OF THE NEW HARVARD MEDICAL SCHOOL.

SAID President Everett on November 4, 1846, in his address at the dedication of the then new medical college on North Grove Street: "The occasion which has called us together is certainly one deserving the public notice of the academic authorities. It arises from the growth of this department of the University to such a degree as to require the abandonment of the edifice which thirty years ago was erected not only for the immediate accommodation of the School, but with due reference to its prospective increase. Such a circumstance affords sufficient evidence of the skill and success with which this branch of the University is administered. It adds the strongest confirmation of that which is apparent from other indications not less satisfactory, that our Medical School has sustained its reputation under the competition of rival institutions and the steady elevation of the standard of professional merit throughout the country."

How little did President Everett foresee that at the end of little more than thirty years his words would be equally applicable to the dedication of another new building; the growth of this department of the University requiring an addition to that edifice which he assisted in dedicating "with due reference to its prospective increase"! No attempt was made either in the address of the President or in the introductory lecture of Professor Hayward, which followed, to forecast the future. The nearest approach to anything like prophecy occurred in the following sentence: "The greater the number of individuals whose perceptive powers have been awakened and guided by sound studies and wise discipline, the greater the probability that some sharpened glance will penetrate the yet undiscovered mysteries of nature." How much has been accomplished since that time in penetrating the mysteries of nature is shown by the retrospect of Dr. Holmes.

One noticeable similarity between the addresses of 1846 and those of the present day is the equal inability to-day to foresee the time to come when the newly dedicated building will be abandoned for one better fitted to the necessities of a future day.

We feel sure our readers will all be grateful to Dr. Holmes for his manly words in regard to the study of anatomy, and we hope his statements will have the weight that belongs to the words of one who speaks from knowledge:—

"In face of the idle and baseless stories which have been circulated, I will say, as if from the chair which I no longer occupy, that the conduct of the difficult, delicate, and all-important branch committed to the care of a succession of admirable Demonstrators, as I have known it through more than the third of a century, has been discreet, humane, faithful, unwearying in diligence; an honor to them and to the classes they have instructed in many of their most important duties."

One change is particularly noticeable to one who looks back to the previous ceremony which we have mentioned. The JOURNAL of that day contented itself with a bare mention of the two addresses, leaving their publication to an entirely separate sheet, deeming that its duty led it to respect the rights of a committee of the students to control the publication of such addresses.

THE WALTHAMSTOW MURDERS IN ENGLAND. CONVICTION OF AN INSANE CRIMINAL.

A RECENT trial in England illustrates the statement made by Maudsley, nearly ten years ago, that the medical jurisprudence of insanity is not so consistent with sound law and with the conclusions of medical science in that country as in the United States.

A young man, William Gouldstone, of sober, industrious habits, five years married, who had always been uniformly kind to those dependent upon him, came home from his work, drowned three of his children in fourteen inches of water, and battered in the skulls of his infant twins, as they lay on their mother's breast. He then said to a neighbor, "I am a happy man." To his wife he remarked, "I have killed all your children, now you will be single again, and I shall be hanged." To the police his statement was, "When I took my money last week, I thought of buying a revolver with it, but I altered my mind, as I thought it would make too much noise. I had a hard job with the two biggest. I thought it was too hot to have five kids in about three years and a half, and I thought I would put a stop to it." He made no attempt at concealment or escape. He had been employed at regular work, with good wages, was doing well, and had no misfortune or misconduct to think of, and no wrong had been done him. His only motive for the act was to translate his children to heaven, and to spare them the trials and sorrows of a troublesome world. His fellow workmen had noticed his mental depression, and his wife had perhaps suggested the idea of killing his children to his morbid fancy by once saying in his hearing that she wished the twins, lately born, dead.

The physician to the house of detention, where Gouldstone was confined previous to his trial, thought him insane, but was not called upon to testify. Dr. Savage, an accomplished alienist of London, after an examination of the prisoner *lasting from a quarter to a half of an hour*, gave evidence that he could not testify to his insanity from his own examination, or certify him as a lunatic, and that the accused knew that he was committing murder. From letters to the *Times* by

Dr. Savage, and by a jurymen on the trial, it appears that Dr. Savage's testimony was thought by the jury to be to the effect that Gouldstone was responsible, whereas, in his letter, Dr. Savage calls it "a typical case of insanity," and complains that he was not allowed to say that the man was irresponsible, because the judge ruled that to be a question for the jury and not for a medical expert. He and Dr. Sunderland apparently wished to express an opinion that Gouldstone was irresponsible, and seemed to be surprised that they were not so understood. The judge charged the jury that if the deed had been done with deliberation and a knowledge of the quality of the act and its consequences, the man was responsible. The jury found a verdict of guilty, after being out fifteen minutes, and the evidently insane man was sentenced to be hanged. A respite has been granted, however, for a fuller investigation of the case.

Whether the medical witnesses were not allowed time enough to make a proper examination, and were not permitted to give a direct opinion as to the murderer's insanity, or the judge and jury considered deliberation and a knowledge of the nature and consequences of an act to indicate responsibility, a bare statement of the facts is sufficient to show that there has been so evident a miscarriage of justice that there can be no real doubt that the man will be sent to an insane asylum rather than be hanged. No other result can come of a careful consideration of so clear a case of insanity in an enlightened community.

In two similar cases, in this State, a man who murdered his mother-in-law, and a woman who killed her child, both with deliberation and a knowledge of the nature and consequences of the act, were recently sent to insane asylums, the grand jury failing to find indictments, upon the evidence of a single competent medical man that the parties were insane. A man who murdered his wife at night, with most carefully prepared plans, was sent to an asylum for life, upon the evidence of two competent physicians that he was suffering from a form of insanity, under the influence of which he would be likely to commit such a crime, although he knew the nature and consequences of the act so well that he tried to conceal it and escape, and although there was nothing in the circumstances of the deed itself to indicate insanity. Two others, quite like Gouldstone, at the beginning of the trial, were declared by the medical witnesses to be too insane to make the plea of "guilty or not guilty" understandingly, and were sent to the insane asylum without even the formality of a trial.

If we felt disposed we might make comments of an *ex cathedra* character, with regard to Gouldstone's trial, similar to those with which we were favored by our friends across the ocean in their discussion of the Guiteau case.

— A M. Sebas informs the French Academy of Sciences that he has discovered a method of causing the alcoholic fermentation to take place in the pulp of melons by adding sulphuric acid. Thirty kilogrammes of pulp will yield five litres of alcohol.

A FRENCH SURGEON'S IMPRESSIONS OF THE UNITED STATES.

IMPRESSIONS of a Trip to North America is the title of a sort of *feuilleton* which has been running through numbers of the *Lyon Médical* for a good many weeks. We recognize in the writer M. Poncet, the former sympathetic assistant of M. Ollier at the Surgical Clinic at Lyons. He evidently came to the United States in as unprejudiced a frame of mind as a Frenchman ever visits a foreign country, and exhibits a candid desire to record his impressions, whether favorable or unfavorable, fairly and impartially, as they were received.

Although it is becoming more the fashion than formerly for the educated classes in France to study other languages than their own, it is still true that Frenchmen travel less than either Germans, Englishmen, or Americans, and when they do travel they carry ever closely present in their thoughts the home standard and the home ways. On the other hand, we Americans have grown sufficiently broad to read with perfect equanimity impressions, and even criticisms, of our habits and customs, provided they are free from malice, or do not come from the pen of one of our own novelists, though the line of toleration being drawn at the native writer shows that we have not yet quite outgrown the narrow spirit which led to the persecution of Cooper by a former generation.

M. Poncet, however, being a foreigner, we shall venture to offer our readers whatever profit is to be derived from seeing ourselves as others see us, and the more readily as it is easy to perceive that, even where exaggerated in details, these impressions offer a by no means untruthful sketch in French charcoal of a country viewed somewhat hastily and superficially through French spectacles.

The writer, as professionally bound, visited the medical centres, the schools and hospitals, and made the acquaintance of medical men, and speaks in handsome terms of approbation of much that he saw. The Boston City Hospital and the Massachusetts General Hospital met with especial approval in his eyes, and his visit to the latter inspires an account of the ether controversy. Boston is called the literary and artistic capital of North America, and the justness of its claim to the title of the Athens of the United States is conceded. A more delicate compliment to our good city is implied where, upon the return home, Lyons is styled the Boston of France. The ambulance service of our hospitals, especially as exhibited at the Chambers Street branch of the New York Hospital, is cordially appreciated.

The writer, however, by no means confines his observations to strictly professional subjects, and the keen eyes of the sometimes too quick-witted Gaul note many things in sociology and anthropology as he travels from place to place and sojourns in hotels. He is struck with the capacity shown by the Anglo-Saxon race for assimilating all others, and by the fact that in the second generation English becomes the universal language. It seems to him, too, that certain

physical characteristics, whether by the mixture of races or under the influence of other factors more or less appreciable, are undergoing rapid modifications. He is struck by a certain similarity of conformation between the women of the "New World" and those of "blonde Albion;" both are deficient in "*pectus*," the mammary glands are but little developed, or there is at least a want of harmony between the size of those organs and the general figure. The upper part of the body, apart from the head, which is often very expressive, sometimes extremely beautiful, is disappointing in volume. The pelvis and the lower limbs, on the other hand, he finds well developed. This disproportion frequently struck the writer at the hospitals. He concludes that the German transplanted to the United States will become less productive, and in this respect more and more like the native American.

It is in his sociological impressions that M. Poncet becomes most interesting and instructive. The apparently small value set upon domestic life, and the mode of preparing and partaking of food and drink prevalent among the inhabitants of the United States, as he saw us, are set down with a robust frankness which the writer evidently thinks scarcely adequate to depicting the reality. These did not harmonize themselves with a taste formed upon the conservative and moderate *vie de Province*, upon the *cuisine Française*, and *vin de Bordeaux*.

What the American woman lacks in *pectus* she makes up in intellectual culture, which is superior to that of the man. Not that her earlier education is better, but later in life, at her own fireside, she has more leisure to devote to study. The man lives but little at home; always more or less mixed up in commercial or industrial undertakings, he is constantly pursuing the dollar, which is not caught whilst asleep; he is nothing if not "professional"; the artistic, the scientific, side of things escapes him almost entirely; one must win money, and that in large quantities and as rapidly as possible. Family life and the intimacy of the domestic interior are diminished by the taste for travel or, rather, the desire for change, and by the ease with which one establishes a domicile for weeks or months in a boarding-house or on a steamboat. When the day is over, and affairs are finished, the American enters his "habitation," but hastens to leave it as soon as possible to indulge his favorite taste. He has a strong love for really alcoholic drinks, but does not *dare*, that is the word, to make use of them even moderately before his wife and children. He has no objection to return home tipsy, but having drunk nothing in his own house the national *respectability* is preserved. Notwithstanding his boasted freedom he is the slave of prejudices and certain conventionalities from which one would suppose him to be free. He drinks iced water or milk at his meals, cocoa or sarsaparilla on a holiday, and then by a back door seeks a concealed corner of a bar-room where he pours down several little glasses of whiskey and brandy, accompanied again by big glasses of the all-pervading iced water, which latter, it is conceded, has

its advantages during the extreme heats of summer. The writer thinks that the consumption of ice in the United States must be something frightful, and he understood the amount of dyspepsia and gastro-enteritis attributable to it was very great. He permits himself to hope that less iced water is drunk in winter. The same extreme summer heats cause doors and windows to be left open recklessly if not with entire impunity, the expression "*courant d'air*" finding no place in the language.

If there is any truth in the proverb, "Tell me what you eat, and I will tell you what you are," it is amply illustrated in the New World. The American does not eat, he simply fills himself; his sole desire is to satisfy hunger, and if he can secure quantity quality is of little importance; hence one frequently sees him ingest a lot of food standing up, or scarcely seated, at a counter. There are fixed hours between which meals may be had, and food must be taken at those times whether one be hungry or not. A despotic, all-powerful public opinion, which no one dares defy, decrees the hours for eating. The meals are always begun with a square block of rancid butter, having an odor of margarine. A pause of fifteen to twenty minutes gives time to attempt the digestion of this compound, and then you find yourself surrounded by a variety of little dishes which you expressed an intention to eat. It matters not that they become cold, for do you not see around you "*des misses, des ladies, des gentlemen*" eating watermelon with chicken, and currant jelly with cutlets and salad! Behind your chair is one negro who fans you, and another who puts ice in your glass. The writer apparently was not struck with the number of our religions, but it does not escape him that we have but one sauce, and that like glue, by which otherwise good meats are ruined. Our eggs have a queer, stale, animal flavor, which is supposed to result from the hens being fed upon meat that they may lay more. Corn is a favorite article of food, and though eaten in various ways is most often boiled on the cob. Three or four of these cylinders are not too much for a lover of this cereal, who will gnaw off the grains with his teeth, and presently leave nothing but "*la carcasse*."

There are, it is true, several good restaurants in New York where one is served more or less *à la Française*, but the prices are prohibitory. It is surprising to the writer that there are no good hotels or restaurants, but he can only explain it on the ground that the Yankee is enchanted with whatever he finds in his own country, and has as limited aspirations in matters of the table as in the fine arts; to give him anything better would be lost trouble; he would not avail himself of it.

The sum total of all this is that in America one lives very badly, and the writer can scarcely believe that it is likely to be selected as a country in which to travel for pleasure. The inhabitant of this country has a good opinion of himself and of his nationality, which surpasses all that one can imagine, and leaves the *chauvinisme* of the French, and the arrogance of the English, far in the background. A view

of the situation which leads us to suspect that the peculiar American humor escaped M. Poncet's comprehension altogether.

After first reading these impressions of M. Poncet, of which the above are examples, we experienced a feeling akin to that caused by seeing Sardou's "Oncle Sam" when first brought out in Paris, and which phrased itself in "a monstrous caricature;" but second thoughts will not permit one to deny that there is a large substratum of truth upon which to base the confidences concerning his trials which the writer makes to his fellow-townsmen, nor is the view of our semi-public hotel and steamboat life a very distorted one, especially when taken by a Frenchman on a summer trip and without his *eau rouge* and *petit pain*.

We bear M. Poncet no malice, and will promise in any case to avoid the little glasses of whiskey and brandy followed by the big tumblers of iced water at the back door of the bar-room, and moreover to sit at home and sip Bordeaux, if he will only win the Academy's prize for devising the destruction of the phylloxera.

MEDICAL NOTES.

— Recent experiments indicate that dogs can eat and digest a quantity of meat equal in weight to from one tenth to one sixteenth of the body. Cold coffee increases very much the appetite and digestive capacity, and after taking it nearly double the quantity of meat may be consumed.

— The French papers report a centenarian named Marie Durand as having been born March 16, 1761; married to Claude Gerard in 1783; a widow for ninety-six years; and still alive at the ripe age of one hundred and twenty-two years.

— Dr. Lucy M. Hall, of the Reformatory Prison for Women at Sherburne, contributes to the October number of the *Journal of Inebriety* an interesting paper on the causes and results of inebriety in women. She has used the opportunities offered by her position to study the conditions under which women of the classes with which she is dealing yield to temptation, either subjective or objective, and become drunkards; and also the action of alcohol upon the organism and the resultant psychical and physical disturbances. She believes intemperance to be greatly on the increase among the female mill-operatives at our large manufacturing centres. Her experience leads her, we are very glad to note, to strongly advocate prolonged periods of control and surveillance, "not penal nor unnecessarily disgraceful, but absolute, without limit, and modified only by positive and continued evidence of reform in the sufferers. In this way only can the degree of usefulness of which they are capable be conserved and their impending ruin averted.

"Prevent those influences which lead to inebriety when possible; when not possible, prevent the further self-ruin of the inebriate by wise, humane, but absolute and unremitting control and protection."

— Another case of attempting to blackmail her medical attendant by a woman on a charge of adul-

tery has been before the courts in England, and again it serves as a text for editorial warning against attending any woman without the presence of a third person unless very sure of the character of the patient, and being sure of very few.

NEW YORK.

— At a meeting of the Society of Medical Jurisprudence and State Medicine, held October 10th, Dr. N. E. Brill read an elaborate report of the recent progress in medico-legal science in America and Europe. It was pointed out in the paper that both England and the United States were much behind continental countries in this department, and the fact was generally admitted in the discussion which followed; in the course of which Mr. Max Eller explained the great pains that were taken in German universities to arouse interest in the subject.

— The Maternity Emergency Hospital in East Twenty-sixth Street, near Bellevue Hospital, has been temporarily closed, by order of Dr. Wm. T. Lush, for thorough disinfection and the repair of defective plumbing. There has been no epidemic of puerperal fever, but two of the lying-in patients having recently suffered from malaria, it was deemed advisable to vacate the premises for a time by way of precaution.

— A case has come up in the courts of violation of the new law known as the Tenement-house Act, which forbids the manufacture of cigars in the city of New York in any section or apartment of a tenement-house in which the manufacturer lives and does household work (with the exception of the store or ground floor), and Judge Dittenhoefer, the counsel for the prisoner, proposes to contest the constitutionality of the act. "By its terms," he said, "it purports to have been enacted to promote public health. If the act really is in the interest of the public health, it is undoubtedly constitutional, for the Legislature has the inherent power to deprive any citizen of the enjoyment of his property if its use is detrimental to the public health. But if that be a mere pretext, and the law operates to protect the health of the individual only, assuming that the manufacture of cigars is unhealthy, the Legislature had no power to pass this law, and it is evident from the law itself that the Legislature must have concluded that the manufacture of cigars is not injurious to the public health, otherwise it would not have permitted such manufacture on the ground floors of tenement-houses."

— The "Old Code" men have been making special efforts to secure the defeat of the proposed amendments to the Constitution and By-laws of the Academy of Medicine, and on the 15th a meeting was held for the purpose of aiding in this, in answer to the following call sent out to the Fellows of the Academy:—

"It is thought to be of the greatest importance to the welfare of the Academy of Medicine that the proposed amendments to its Constitution and By-laws be defeated. Will you therefore meet some of the friends of the Academy who are opposed to the passage of these amendments, and who desire to put an end to the discussion of codes of ethics in that body? The

intended conference will be held at the Mott Memorial Hall, 64 Madison Avenue, on Monday, October 15th, at 8 P. M." (Signed) Alouzo Clark, T. M. Markoe, Abram Dubois, John T. Metcalfe, H. D. Nicoll.

— Dr. Frederick D. Lente died at Cold Spring, on the Hudson, in the sixtieth year of his age, on the 11th of October, of cerebro-spinal meningitis. He was born in Newbern, North Carolina, and was a graduate of both the University of that State and the University Medical College of New York. He studied for a time under Dr. Alfred C. Post, and afterwards served for two years under Dr. Valentine Mott, on the house staff of the old New York Hospital. In 1851 he was appointed surgeon to the West Point Foundry at Cold Spring, where he remained until 1871, in the meanwhile building up a very extensive family and consulting practice on both sides of the Hudson. He then came to New York, and was appointed to the chair of Gynecology and Diseases of Children in the University Medical College; but, on account of ill-health, was obliged to return to the country in the following year. He remained at Cold Spring till 1875, when the condition of his health forced him to again make a change. He then began to practice at Palatka, Florida, in the winter, and at Saratoga Springs during the summer months; and this he continued up to the time of his last illness. Dr. Lente was an enthusiastic and industrious worker in the profession, and a large and original contributor to periodical medical literature. He was one of the founders of the American Academy of Medicine, and its first president. He was also an honored member of the American Neurological Association and of many other societies, and died universally beloved for his many genial qualities, as well as respected for his high scientific attainments and noble character.

— The body of Dr. Charles S. Blumenthal, a prominent homœopathic physician, lately deceased, has been taken to Washington, Penn., for cremation, in accordance with a special request that he left.

“KNOW DR. KNAPP!”

WE extract the following passage from the introductory lecture of a distinguished New York ophthalmologist as given in the *Medical Record* of October 6th:—

“Ten years ago I was consulted by a Boston physician for a serious ophthalmic difficulty. I advised him to stay in New York and have his eyes treated. He asked me, quite astonished, ‘Why, have n’t we as good physicians in Boston as you have in New York?’ I replied without feigned modesty, ‘No, sir, and you never will have; for talent, like merchandise, has a tendency to seek the best market.’ He understood, stayed, had his eyes cured, and soon afterward settled in New York himself.”

“The old philosophers,” says our lecturer farther on, “held it to be the highest maxim, ‘Know thyself.’” But the essence of the philosophy here inculcated appears, to our provincial comprehension, to be “Know Knapp.”

Miscellany.

THE HOT BATH IN ASPHYXIA.

THE *Australasian Medical Gazette* reproduces from the *Journal de Thérapeutique* a note on this subject as follows:—

A short time ago Dr. Goyard published the case of a still-born child which revived almost immediately after being put in a bath of 122° F., though for more than two hours he had tried in vain electricity, friction with hot cloths, and insufflation, to restore life. Hot baths of such a temperature are generally dangerous. From P. Bert's experiments it is well known that immersion in a bath of 122° F. for longer than a quarter of an hour is fatal, in consequence of the coagulation of the interfibrillar juices of the muscles, therefore caution is necessary. The still-born child should never remain longer in the bath than four or five minutes, and if there is no sign of respiration after three minutes, it may be considered dead. If left longer in rigor mortis will surely set in, and this the practitioner, even for appearance sake, ought to avoid; nor should the temperature, measured by the thermometer, ever exceed 122° F. The first respiration generally begins during the first and second minute, and after three or four minutes the child should be taken out. The reviving effect of the hot bath in Goyard's case is the more remarkable as he and his assistants had given up all hope, and believed the child already to be dead for some time. Hot water can always be had in confinements. Dr. Gustave le Bon believes in no other means of saving life of asphyxiated persons than application of heat and artificial respiration. Insufflation, he says, is worse than useless; it only drives the air in the stomach, which it distends, and thereby impedes respiration; or if it were possible by a tube to force air into the lungs and into air cells, the pressure of the air thus forced in would only compress the capillaries; even artificial respiration is useless if the blood is already coagulated. The success of the hot bath in cases of asphyxia of still-born children led to its trial in asphyxia from drowning, but without very marked results. In drowning two kinds of asphyxia occur; people who fall into the water may faint at once (syncope), whatever may be the cause of it, and the shock, the sudden cold, etc., may cause respiration to cease immediately, consequently the characteristic signs of suffocation by drowning are absent; such people may recover even if they have been under water for more than a quarter of an hour. Others try to breathe while submerged, and in those we always find the usual signs of suffocation, namely, congestion of the lungs, ecchymosis of pleura, etc., but especially clots of coagulated blood in the heart, in the larger vessels and their branches. These clots form three or four minutes after asphyxia begins, hence it is clear how vain all our efforts to restore life in such cases must be. Le Bon shows by his experiments that asphyxia from drowning takes place not only through coagulation, but also through the lowering of the temperature of the blood, which again is caused by the temperature of the water, as well as by the interruption of the respiration, which, as is well known, is the chief source of heat of the body. Even after prolonged cold bathing asphyxia never occurs, but the temperature of submerged animals sinks rapidly during their struggles for breath, and the same happens in other cases of asphyxia, that is, from carbonic acid. In a person taken out of the water ap-

parently dead, not only is the temperature of the body lowered, but it continues to fall still more, and death must be the natural result. It is therefore plain enough that the first step towards a rational treatment is the application of artificial heat. Hot cloths, however, soon lose their heat, hot bricks, etc., act only locally, but a hot bath of 122° F. will often prove successful if used with caution, and for no longer time than a few minutes. If one so hot is not at hand, water of a temperature from 97° to 100° F. will be sufficient to prevent the temperature from sinking below the normal, but it then becomes necessary to place the patient before an open fire, guarding nose and mouth against the direct heat of it. A temperature of from 90° to 100° F. can in this way easily be borne. The thermometer, showing the temperature of the body, should now guide us in our further treatment; it will decide when it is time to put the patient to bed, how long we may leave him in it or remove him again to the fire, and what distance from or near it will be the most useful for him.

BOSTON DISPENSARY.

THE statistics of this institution for the year ending September 30, 1883, are as follows: The number of new patients treated at the central office is 14,382, classified as follows: Medical Department, men, 2330; women, 4161; children, 2056; total, 8549. Surgical Department, men, 1689; women, 411; children, 346; total, 2446. Dental Department, men, 268; women, 441; children, 580; total, 1289. Skin Department, men, 479; women, 267; children, 172; total, 918. Department for Diseases of the Nervous System, men, 51; women, 46; children, 9; total, 106. Department for Diseases of the Throat and Nose, men, 268; women, 361; children, 193; total, 822. Department for Diseases of the Eye, men, 39; women, 62; children, 53; total, 154. Department for Diseases of the Ear, men, 24; women, 37; children, 37; total, 98. The number of visits made by patients, old and new, at the central office, is 26,623, classified as follows:—

Medical, 14,037; surgical, 12,586; total, 26,623.
The number of new patients treated in the districts is 12,915, including 151 cases of midwifery, classified as follows: men, 2384; women, 4916; children, 5617; total, 12,915.

The results of treatment in the Districts are as follows:—

Discharged cured or relieved	11,794
Removed to hospitals	796
Died	311
Remaining under treatment	76

12,976

Under treatment at last annual report 61

12,915

The number of new patients treated in the central office and in the districts is 27,297

Number of cases of midwifery attended during the year 151

Number of cases of midwifery attended since July, 1858 4,018

Whole number of patients since October, 1796 841,712

Whole number of patients since July, 1856 722,909

Average daily attendance at the central office during the year 84

Surgeons: Thomas Waterman, M. D., Charles E. Inches, M. D., J. Foster Bush, M. D., Francis H. Williams, M. D.

Physicians: Robert Disbrow, M. D., Joseph P. Oliver, M. D., Robert M. Lawrence, M. D., John Dixwell, M. D., Thomas M. Rotch, M. D., Claudius M. Jones, M. D., Henry C. Haven, M. D., Harold Williams, M. D., James J. Minot, M. D., George M. Garland, M. D., William W. Gannett, M. D., Edward M. Buckingham, M. D., Henry L. Morse, M. D., John B. Swift, M. D., Samuel J. Mixer, M. D., Vincent Y. Bowditch, M. D. Assistant Physicians: Walter J. Otis, M. D., William C. Emerson, M. D. Department for Diseases of the Nervous System, Physicians, Frederick W. Vogel, M. D., Morton H. Prince, M. D. Department for Diseases of the Skin, Physicians, Francis B. Greenough, M. D., Abner Post, M. D. Department for Diseases of the Throat and Nose, Physicians, Thomas G. DeBlois, M. D., John W. Farlow, M. D. Department for Diseases of

Women, Physicians, William H. Baker, M. D., Francis H. Davenport, M. D., Charles M. Green, M. D., John W. Elliot, M. D. Department for Diseases of the Eye, Physician, Charles H. Williams, M. D. Department for Diseases of the Ear, Physician, Frank H. Hooper, M. D. Department for Diseases of the Genito-Urinary System, Physicians, George H. Tilden, M. D., Francis H. Watson, M. D. Dental Department, Dentist, Joseph E. Waite, D. M. D.

District Physicians: No. 1, Willis B. McMichael, M. D. No. 2, William N. Bullard, M. D. No. 3, F. H. Lombard, M. D. No. 4, Robert L. Burrell, M. D. No. 5, Robert B. Dixon, M. D. No. 6, George G. Hayward, M. D. No. 7, Rufus P. Kingman, M. D. No. 8, Flavill W. Kyle, M. D. No. 9, Frederick F. Doggett, M. D. Apothecary: Frank H. Clark; assistant apothecary, Robert Nixon.

WILLIAM H. H. HASTINGS, M. D., Superintendent.

LADIES' DRESSES.

COMMENTING on a letter from Dr. Horace Dobell in the *London Times* concerning the bad effects of the "braces system of suspension" for women's dress, in which he urges that the hips, and not the shoulders, are the best part of the human frame for the support of weight on the ground that braces restrict the elevation and antero-posterior expansion of the chest-movements, even more important, as the writer justly observes, to women than to men, the *British Medical Journal* agrees that there is much truth in these remarks. It trusts, however, "that the assertion that the system of suspension of the clothes from the shoulders is the outcome of the arguments used by 'dress reformers' against tight lacing will not be seized by the ladies as a statement in favor of continuing the use of stays. The evils referred to by Dr. Dobell doubtless are often produced by the use of braces, and especially when a heavy weight is suspended. This weight is often unnecessarily great in consequence of the looseness of ladies' clothing. If, instead of hanging a quantity of loose clothes round the legs, the garments covering these extremities were chiefly close-fitting, the weight of the clothing might be very much lessened, because when close to the body they preserve the warmth much better than when surrounding the legs loosely. The principle of dual garments might be carried on without altering the external appearance of female dress; for, with the use of warm, close-fitting drawers or trousers, the outer skirts might be made in the usual manner, but of much less thickness and weight. Many ladies now wear neither stays nor suspenders, and yet experience no difficulty in supporting their skirts, chiefly upon the hips."

We have long thought that, in their zeal against tight lacing, our "dress reformers" were doing society a disservice in decrying the moderate use of stays, and were likely to provide the profession with a crop of evils resulting from their contrivances quite as formidable as any hitherto traced to the abuse of corsets. The thoracic organs are quite as worthy of fair play as the abdominal.

ATTENUATION OF CHANCROUS VIRUS.

THE *Lancet*, commenting on M. Aubert's researches regarding the vitality of chancrous virus, says:—

"We have already drawn attention to the hypothesis that the principle of attenuation may play an important part in the explanation of some of the remarkable changes which diseases undergo, either under the influence of intentionally administered agents or from the action of quasi-accidental circumstances originating

within or without the organism. The notion of destroying or annihilating a disease can only be entertained side by side with the belief that the chief factor of a disease is some tangible entity. Absolute extermination can only be aimed at whilst the micro-parasites exist in the environment. When once the organism is attacked we must trust to attenuation. Chemically the distinction between destruction and attenuation, however great, may be regarded as one of degree. In destruction we may say there is a passage from the organic to the inorganic; whilst in attenuation the transition may be to a body which is equally vital, organic, and complex with the original poison, but possessing different physiological properties. One of the latest practical phases which this new development of the principle of attenuation has received comes from the observations and recommendations of M. Aubert. The author concludes from his experimental and clinical researches, that in the agency, heat, we possess an excellent means of attenuating the chancrous virus, and consequently of treating the simple chancre. He finds that a temperature a little above the normal body heat, of 37° C. to 38° C., destroys the virulence of the poison. It is necessary to combine elevation of the internal body-heat with that of local warmth, and practically to imitate what goes on in the organism affected with erysipelas when there is general fever and local heat. M. Aubert advises the employment of the hip-bath, made with water at a temperature of 40° C. to 42° C., and continued for several hours. Chancrous ulcers may thus have their virulence destroyed. This mode of treatment is considered to be the best for phagedænic ulceration, and for those subphimotic sores which ordinary dressings cannot touch. Similar treatment directed to specific buboes is said to convert them into simple abscesses. The value of the warm bath, hot fomentations, and the, at times, much derided poultice in the treatment of angry and virulent forms of inflammation has been long admitted. It is possible that a more scientific explanation than has hitherto been forthcoming of the *rationale* of these familiar remedies is afforded by the present notions of attenuation.

OPENING THE CHEST IN EMPYEMA.

In a paper presented to the British Medical Association¹ Dr. Eddison tabulates forty cases of opening of the chest for empyema occurring in his own service and that of his colleagues at the Leeds Infirmary. He summarizes the conclusions which he thinks are supported by these cases in the following way:—

Children and young people do much better than adults. The duration of a case before operation has, on the whole, an unfavorable effect in proportion to its length. A very large amount of pus has a distinctly bad effect. Anæsthetics, ether at any rate, may be safely given provided the breathing and circulation are fairly good at the time. The particular point at which the chest is incised has not much importance. The contents should be allowed to escape slowly; the larger the quantity the more slowly should they be removed. The maintenance of free drainage is of the very highest importance; any accumulation of pus, owing to obstruction of the drainage tube or to any other cause, being followed by an increase of temperature and delay in the progress of the case. The use of antiseptics is worth the extra trouble; and al-

though cases may do admirably in which no antiseptics are used, yet on the whole patients do better and seem more comfortable when they are used both for operations and dressings. Simple cases of empyema—in which the lungs are themselves sound, and in which the other organs of the body are fairly healthy—are almost sure to do well, but it is not possible in any case to estimate its probable duration with any exactness. Cases in which fluid has reaccumulated repeatedly after having been drawn off, and especially when such fluid contains blood-cells, do badly, as a rule, though not always; in such cases it may be suspected that the lung itself is diseased, and probably tuberculous. No matter what complication is present, or what the probability of an ultimately unsatisfactory ending of the case may be, it is the duty of the attendant to incise the chest even if only for the sake of temporary relief from pain and distress.

CORROSIVE SUBLIMATE IN MIDWIFERY PRACTICE.

In M. Tarnier's practice corrosive sublimate, in solution, has for some time been used as an antiseptic with great success (*Glasgow Medical Journal*, August, 1883, and *Journal de Thérap.*, February 15, 1883). Every one (nurse, students, etc.) who has to approach the patient has to wash the hands in the solution; this has not yet produced any indication of salivation in the attendants. When the patient is taken into the hospital she has a bath, if it is found convenient; the whole of the genital region is then carefully bathed with a 1:2000 solution of the sublimate; finally, the vaginal canal is thoroughly injected with the same solution (tepid), and a compress soaked in the same placed over the parts. During labor the injection is renewed about every three hours. After delivery is completed, another injection of the same kind is given, and the parts are carefully sponged with the solution. If labor has in all respects been normal and everything seems to be going on well, the parts are afterwards simply sponged externally with a 1:80 carbolic acid solution and covered with a compress soaked in the same.

If the labor has been completed by artificial aid, if there remain in the uterus portions of the membranes, if there is sloughing, or especially if the lochia turn fetid, the 1:2000 solution of sublimate is again used; four, five, or six times a day, a vaginal injection with the solution is practiced, the parts are sponged with it, and the napkins soaked in it.

Three hundred and fifty women have been treated in this way, and of this large number only one died. Her death was caused by peritonitis, and at the autopsy the remains of a former attack of the same disease were traceable.

Under the influence of the sublimate, the lochial discharge loses all trace of fœtor in one or two days, and the fever diminishes rapidly. Involution of the uterus seems unusually rapid; in many cases, when the patient was dismissed on the tenth or fifteenth day, the cervix uteri was unusually firm, and had almost completely regained its normal shape and consistence. No case of salivation or of anything approaching to mouth symptoms, was met with among these patients.

In three cases of puerperal fever intra-uterine injections of the sublimate solution were used with perfect success.

¹ JOURNAL, September 29, 1883.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 6, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	541	209	25.76	14.72	6.82	1.94	5.89
Philadelphia.....	846,984	319	112	16.01	16.64	2.20	2.51	8.79
Brooklyn.....	566,689	207	82	23.92	9.31	9.80	1.47	4.41
Chicago.....	503,304	210	84	30.94	10.47	6.66	7.14	8.09
Boston.....	362,535	187	90	31.51	11.75	13.88	5.34	8.44
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	144	66	24.29	9.72	6.25	1.39	13.19
Cincinnati.....	255,708	88	33	17.04	17.04	8.52	4.54	3.41
New Orleans.....	216,140	147	38	7.48	8.84	6.80	.68	—
District of Columbia.....	177,638	56	26	11.46	29.26	5.34	1.78	5.34
Pittsburg.....(1883)	175,000	70	—	34.32	8.58	8.58	5.72	8.58
Buffalo.....	155,137	74	38	35.10	10.80	25.65	1.35	1.35
Milwaukee.....	115,578	48	36	24.96	8.32	12.48	—	6.24
Providence.....(1883)	116,755	36	10	16.68	22.24	2.78	5.56	5.56
New Haven.....(1883)	73,000	14	7	28.56	7.14	7.14	7.14	7.14
Charleston.....	49,999	36	11	30.58	5.56	8.34	11.12	—
Nashville.....	43,461	20	8	40.00	25.00	25.00	—	5.00
Lowell.....	59,485	20	9	20.00	30.00	20.00	—	—
Worcester.....	58,295	21	11	33.32	9.52	4.76	9.52	14.28
Cambridge.....	52,740	16	6	18.75	12.50	6.25	6.25	6.25
Fall River.....	49,006	29	10	31.05	10.35	10.35	13.80	6.90
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	9	1	33.33	22.22	11.11	22.22	—
Springfield.....	33,340	13	1	—	—	—	—	—
Salem.....	27,598	13	1	7.69	15.38	—	—	—
New Bedford.....	26,875	16	4	25.00	12.50	6.25	12.50	—
Somerville.....	24,985	8	3	25.00	12.50	25.00	—	—
Holyoke.....	21,851	8	3	25.00	12.50	—	12.50	—
Chelsea.....	21,785	8	1	12.50	12.50	—	—	12.50
Taunton.....	21,213	5	3	—	—	—	—	—
Gloucester.....	19,329	7	4	—	—	—	—	—
Haverhill.....	18,475	6	3	16.66	—	16.66	—	—
Newton.....	16,995	3	2	—	—	—	—	—
Brockton.....	13,608	—	—	—	—	—	—	—
Newburyport.....	13,537	4	0	—	—	—	—	—
Fitchburg.....	12,405	4	0	—	—	—	—	—
Malden.....	12,017	4	2	—	—	—	—	—
Nineteen Massachusetts towns.....	145,647	46	9	19.53	41.23	8.68	10.85	—

Deaths reported 2337 (no report from St. Louis): under five years of age, 783: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 567, consumption 325, diarrhoeal diseases 210, lung diseases 150, diphtheria and croup 148, typhoid fever 88, scarlet fever 49, malarial fevers 28, cerebro-spinal meningitis 12, whooping-cough 12, puerperal fever seven, measles six, erysipelas six. From *scarlet fever*, Chicago 10, New York eight, Boston six, Philadelphia, Brooklyn, and Buffalo five each, Pittsburg and Milwaukee three each, Baltimore two, Providence and New Bedford one each. From *malarial fevers*, New York 11, Brooklyn six, Charleston four, Chicago and Baltimore two each, Philadelphia, New Haven, and Nashville one each. From *cerebro-spinal meningitis*, New York six, Chicago three, Worcester, Salem, and Holyoke one each. From *whooping-cough*, New York, Brooklyn, and Pittsburg three each, Philadelphia, Chicago, and Cincinnati one each. From *measles*, New York five, Baltimore one. From *erysipelas*, New York three, Brooklyn, Chicago, and New Haven one each. From *small-pox*, Nashville one.

In 36 cities and towns of Massachusetts, with an estimated population of 1,065,243 (estimated population of the State 1,922,530), the total death-rate for the week was 18.68 against 20.08 and 17.62 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending September 22d, the death-rate was 19.6. Deaths reported 3235: diarrhoea 267, acute diseases of the respiratory organs (London) 167,

scarlet fever 114, whooping-cough 68, fever 67, measles 43, diphtheria 35, small-pox (Birmingham seven, Sunderland and London two each, Liverpool one) 12. The death-rates ranged from 14.6 in Derby to 22 in Newcastle-on-Tyne; Leicester 15.3; London 17; Portsmouth 18.3; Nottingham 19.9; Sheffield 20.8; Birmingham 22; Manchester 23.2; Liverpool 26.4. In Edinburgh 16.4; Glasgow 23.3; Dublin 24.9.

For the week ending September 15th, in 168 German cities and towns, with an estimated population of 8,665,993, the death-rate was 19.8. Deaths reported 3934; under five years of age, 2141; consumption 512, diarrhoeal diseases 326, lung diseases 256, diphtheria and croup 176, whooping-cough 62, typhoid fever 54, scarlet fever 58, puerperal fever 34, measles and röteln 31, typhus fever (Berlin one) one, small-pox (Neustadt-Magdeburg one) one. The death-rates ranged from 13.7 in Wiesbaden to 38.9 in Posen; Königsberg 28.3; Breslau 25.6; Munich 26; Dresden 25.2; Berlin 25.8; Leipzig 22.7; Hamburg 21.5; Cologne 22.4; Frankfurt a. M. 17.1; Strasburg 24.9.

For the week ending September 22d, in the Swiss towns, there were 18 deaths from consumption, diarrhoeal diseases 17, lung diseases 12, whooping-cough seven, typhoid fever four, scarlet fever one, erysipelas one, puerperal fever one. The death-rates were, at Geneva 12.3, Zurich 2, Basle 18.3; Berne 12.4.

The meteorological record for the week ending October 6th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
Sept.- Oct., 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M. .	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 30	29.872	53	65	46	90	93	93	92	SW	E	NE	6	9	4	T	R	O	—	—
Mon., 1	29.918	45	55	42	83	56	83	74	N	SE	SE	11	9	3	O	C	C	—	—
Tues., 2	29.760	44	50	39	80	100	100	93	SE	SE	NW	12	22	17	O	C	O	—	—
Wed., 3	29.964	50	53	39	93	50	60	68	W	W	W	4	14	12	C	R	C	—	—
Thurs., 4	30.220	43	50	36	73	37	54	55	NW	NW	W	6	16	9	C	F	C	—	—
Fri., 5	30.313	41	52	33	61	40	72	58	W	NW	NW	7	16	4	C	C	C	—	—
Sat., 6	30.339	45	56	31	58	41	60	53	W	W	W	6	8	8	C	F	C	—	—
Means, the week.	30.056	46	65	31				70										24.65	1.99.

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 5, 1883, TO OCTOBER 12, 1883.

HAMMOND, JOHN F., colonel and surgeon. Leave of absence on surgeon's certificate of disability granted April 2, 1883, extended six months on surgeon's certificate of disability. Paragraph 7, S. O. 231, A. G. O., October 8, 1883.

SWIFT, EBENEZER, lieutenant colonel and assistant medical purveyor. Under the provisions of Section 1 of the Act of Congress approved June 30, 1882, is, by operation of law, this day retired from active service, and will proceed to his home. Paragraph 4, S. O. 231, A. G. O., October 8, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING OCTOBER 13, 1883.

HILAND, THOMAS, surgeon, granted leave of absence for one year, with permission to leave the United States.

SIMON, WILLIAM J., surgeon, and CRAWFORD, M. H., passed assistant surgeon, ordered to report on November 1st for duty on board the U. S. S. Trenton.

DEATH. SURGEON-GENERAL CRANE.

BRIGADIER-GENERAL CHARLES H. CRANE, Surgeon-General, United States Army, died suddenly in Washington, on October 10th, in the fifty-eighth year of his age. For a few weeks he had complained of a severe cold, which especially irritated his throat; he continued to perform his official duties, however, until about two weeks previous to his death, when, in accordance with the advice of his physicians, he remained at home. Two days before his death his symptoms became alarming, and an unexpected hæmorrhage was the immediate cause of death. Dr. Crane was born in Rhode Island in 1826, and was appointed to the Medical Department of the Army, from Massachusetts, in February, 1848. He was made full surgeon in May, 1861, and Assistant Surgeon-General on July 28, 1866, and Surgeon-General in August, 1882, on the retirement of his predecessor, Surgeon-General Barnes.

ERRATA. — On page 304 of the JOURNAL of September 27, 1883, on the eighteenth line, instead of *a pill* read *april*.

On page 330 of the JOURNAL of October 4th, for *M. Burf* (several times) read *M. Burg*.

On page 352 of the JOURNAL for October 11, second column, lines 31, 32, for *monthly index—medical* read *Monthly Index-Medicus*.

BOOKS AND PAMPHLETS RECEIVED. — A Manual of Pathology. By Joseph Coats, M. D. With Three Hundred and Thirty-Nine Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1883.

Medical Education and the Practice of Medicine in the United States and Canada. Illinois State Board of Health. 1883.

A Guide to American Medical Students in Europe. By Henry Hun, M. D., Lecturer on Diseases of the Nervous System in the Albany Medical College. New York: William Wood & Co. 1883.

The Physiological Factor in Diagnosis. A Work for Young Practitioners. By J. Milner Fothergill, M. D. New York: William Wood & Co. 1883.

Transactions of the Colorado State Medical Society at its Thirteenth Annual Convention held in Denver, June, 1883.

Twenty-Fourth Annual Circular of the Physio-Medical Institute, Cincinnati. Announcement for 1883-84.

Insanity considered in its Medico-Legal Relations. By T. R. Buckham, A. M., M. D. Philadelphia: J. B. Lippincott & Co. 1883.

Transactions of the American Otological Society, Sixteenth Annual Meeting, Hotel Kaaterskill, Catskill Mountains, July 17, 1883. Vol. III, Part 2. Published by the Society. 1883.

The Medical Student's Manual of Chemistry. By R. A. Witthaus, A. M., M. D. New York: William Wood & Co. 1883.

The Treatment of Wounds; its Principles and Practice, General and Special. By Lewis S. Pilcher, A. M., M. D. With One Hundred and Sixteen Wood Engravings. New York: William Wood & Co. 1883.

Circulars of Information of the Bureau of Education. No. 3. 1883. Proceedings of the Department of Superintendence of the National Educational Association at its Meeting at Washington, February 20-22, 1883. Washington: Government Printing Office. 1883.

L'Année médicale (Cinquième année). Résumé des progrès réalisés dans les Sciences médicales publié sous la direction de Dr. Bourneville, Médecin de l'Hospice de Bicêtre. Paris: E. Plon et Cie, Imprimeurs-Éditeurs.

Diagnosis of Ovarian Tumors. Lecture delivered by Edward Borch, A. M., M. D. St. Louis, Mo.: C. M. Curtman, Printer.

Proceedings of the Connecticut Medical Society, 1883. Ninety-Second Annual Convention held at Hartford, May 23d and 24th. New Series, Vol. II, No. 4. Published by the Society. Hartford, Conn.: Press of the Case, Lockwood and Brainard Company. 1883.

Results of Treatment of Injuries occurring at Parturition. A Paper read before the Maine Medical Association June 13, 1883. By S. C. Gordon, M. D.

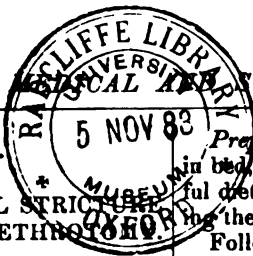
Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-Fifth Annual Session, held at Baltimore, Md., April, 1883.

Cholera a Disease of the Nervous System. By John Chapman, M. D. London: J. & A. Churchill. 1883.

The Powers and Duties of Local Boards of Health. Circular issued to the Health Boards and Health Officers by the State Board of Health of Wisconsin.

The Classification, Training, and Education of the Feeble-Minded, Imbecile, and Idiotic. By Charles H. Stanley Davis, M. D. (Reprint.)

The Disposal of Sewage in Suburban Residences. By Edward S. Philbrick, M. Am. Soc. C. E. (Reprint.)



Original Articles.

NINETEEN CASES OF URETHRAL STRICTURE TREATED BY INTERNAL URETHROTOMY WITH REMARKS.

BY G. H. TILDEN, M. D., AND F. S. WATSON, M. D.

OF the nineteen cases of urethral stricture subjected to Otis's operation of internal urethrotomy, to the consideration of which we beg your attention this evening, thirteen have been treated by ourselves, and for the opportunity of reporting the remaining six we are indebted in two instances to the kindness of Dr. Morse, and in the other four to that of a member of the Carney Hospital staff.

In presenting this short series we wish to offer first an analysis of the cases, and subsequently state a few conclusions to which we have been led by our experience.

ANALYSIS OF CASES.

Causation. In all cases gonorrhœa.

Duration of Symptoms of Stricture. Average duration, six years. Longest duration, twenty years. Shortest duration, one month.

Age of Patients. Four cases aged respectively fifty, sixty-six, forty-five, forty-nine; all the rest were young men under forty.

Symptoms. Gleet was present in all cases except one, and the only symptom in three. Abnormal frequency of micturition in ten. Pain or uneasiness on micturition in eight. Neuralgic pains in back and legs in six. Changes in size or form of stream in ten. Muscular and mental fatigue in all.

Number, Size, Situation, and Character of Strictures. The strictures were all well organized. All anterior to four inches from meatus except one, which was situated at five and a half inches. The largest number of strictures in any one urethra was five. In four cases there were three strictures. In seven cases there were two strictures. In the rest there was one in each instance.

The calibre of the strictures varied in different cases from fourteen to thirty-one French scale. A detailed table follows:—

No. of Case.	Normal Calibre of Urethra.	No. and Situation of Strictures.	Their Calibre (French.)
1	34	At 1 inch, at 1½, at 3½.	26.
2	34	At ½ inch, at 1, at 3.	21, 21, 22.
3	34	At ½ inch, at 2½, at 3½.	23, 21, 24.
4	40	At ½ inch, at 3½.	31, 21.
5	31	At 2½ inches.	28.
6	32	At 3½ inches.	26.
7	31	At 2½ inches, at 3½.	21, 21.
8	31	At 3½ inches, at 5½.	15, 15.
9	34	At 3 inches.	14.
10	32	At ½ inch, at 8.	29, 29.
11	34	At ½ inch, at 2½, at 2½.	28, 21, 21.
12	30	At 3 inches.	25.
13	30	At 2½ inches, at 8.	21, 27.
14	30	At 2 inches, at 2½.	23, 24.
15	30	At 2½ inches.	18.
16	33	At 3 inches, at 3½.	25, 22.
17	34	Five strictures.	23.
18	33	At 3 inches.	30.
19	30	At 1 inch.	23.

Complications. In one case gonorrhœal rheumatism. In one case hypertrophied prostate. Examination showed no renal complication in the urine of any of these patients.

¹ Read before the Surgical Section of the Suffolk District Medical Society, October 13, 1883.

Preparatory treatment consisted in all cases of rest in bed, quinine, citrate of potash, or buchu, and a careful diet for from thirty-six to forty-eight hours preceding the operation.

Following the operation five of the nineteen cases had constitutional disturbance, consisting of one or more chills and a rise of temperature.

One of these cases had partial suppression of urine during thirty-six hours, several chills, and a high temperature; this was the only case which had a serious aspect.

In the other four cases the chill and fever occurred within thirty-six hours after the operation, and were not repeated.

Hæmorrhage. None of consequence occurred in any case. The average length of confinement to the hospital was six days. The longest period was fourteen days. The shortest two days.

Chordee. In four cases no chordee followed the operation; in all the others chordee was present to a greater or less extent.

Cessation of Gleet after the Operation. Gleet had been present for several years previous to the operation in most of the cases. In thirteen cases gleet ceased entirely after the operation. The average time of its persistence in these cases was thirty-two days. The longest lasted three months. The shortest lasted ten days. In the remaining six cases gleet was present in two at the end of ten weeks. Of the other four two were lost sight of, a third had no gleet at any time. A fourth case still had gleet at the end of five months.

CESSATION OF GLEET AFTER OPERATION.

No of Case.	Previous Duration of Gleet.	Cessation after Operation.
1	Five years.	Six months.
2	Three years.	Twelve months.
3	Five months.	Nine months.
4	One year.	Four months.
5	Two years.	Six months.
6	Ten months.	Four months.
7	Twelve years.	Four months.
8	Uncertain.	Three months.
9	Uncertain.	Fourteen months.
10	Three years.	Ten days.
11	One year.	Fourteen days.
12	Five years.	Eighteen days.
13	Uncertain.	Ten days; recurrence at end of nine months, with recontracted meatus.
14	Uncertain.	Ten weeks after operation still has gleet.
15	Four years.	Ten weeks after operation still has gleet.
16	Nine months.	Five months after operation still has gleet.
17	Ten months.	Lost sight of case.
18	Uncertain.	Lost sight of case.
19	No gleet at any time.	

Recontractions. In one case there has been a recontraction at the end of five months. In none of the others was any present at the last examinations. The time which has elapsed since operation is too short, however, to enable us to state that a recontraction may not yet occur in some of the cases.

Neuralgic pains, frequent micturition, except in one case complicated by hypertrophied prostate, and general malaise have in all instances disappeared within the first few days following the operation, and have not returned.

The conditions following internal urethrotomy, when done by Otis's method, are, in an ordinary case, slight hæmorrhage, some pain during micturition, which varies in amount in different cases, and a moderate evening rise in temperature for a day or two. Rest in bed

is necessary for a few days, and confinement to the house is advisable for about a week, at the end of which time the only symptoms remaining are more or less chordee and urethral discharge. All other symptoms which may have been due to the presence of urethral stricture, such as nocturnal and diurnal frequency of micturition and reflex symptoms of a nervous character, disappear. There is quick relief also from the fatigued condition both of mind and body which is so frequent an attendant upon urethral stricture, and in not a few instances a well-marked and rapid increase of weight manifests itself after the operation. The subsequent passage of sounds is oftentimes painful, but much gratuitous suffering may be spared to the patient if each passage of sounds is begun with the introduction of an instrument several sizes smaller than the full size to which the strictures have been divided. The use of conical steel sounds is required after the operation in order that the cut surfaces of the incised wound of the urethra may not unite, but may heal over from the edges, thus adding to the calibre of the urethra at the point of incision double the depth of the incision. By reason of the fact that in this operation the incisions are made anterior to the membranous portion of the canal, it is never necessary, except immediately after the operation, to pass the sounds beyond this point, and always inadvisable, as the repeated passage of instruments through the prostatic urethra exposes the patient to the risks of epididymitis and prostatitis. They should as a rule be introduced every other day, and the length of time for which this should be done of course varies in each case. When the incisions have thoroughly healed, a fact indicated by the absence of blood upon the sound and by the cessation of pain due to its introduction, if the strictures have been completely divided it is no longer necessary to subject the patient to this annoyance.

The operation of internal urethrotomy cures gleet in successful cases by removing stricture, which is the cause of gleet, and in this way places the urethra in the best state to recover from its chronic inflamed condition. Very often gleet will cease spontaneously after the removal of the stricture by which it is kept up, but sometimes other treatment is required either to hasten the progress of cure or even to bring it about at all. It should not be forgotten that there are other conditions besides stricture which may sustain a gleet discharge from the urethra. Areas of inflammation behind the sphincter muscles of the urethra, implication of its lacunæ and follicles, irritating conditions of the urine, and debility or lack of reparative power on the part of the patient, may all of them perpetuate gleet.

Another cause for the persistence of a urethral discharge, and one which is easily overlooked, is too much and too long continued meddling with the urethra by means of injections and the introduction of instruments. In many cases, however, the urethral discharge will cease spontaneously or with a little assistance after the healing of the wounds.

The passage of full-sized sounds after the operation serves another purpose than that of insuring the calibre of the urethra, it being also good treatment for the granular condition of the urethral mucous membrane, which exists behind and between strictures, and from which comes the gleet discharge. By reason of this it is sometimes advisable to continue their use after the wounds due to the operation have healed.

Other methods of treatment are general and localized injections and topical applications, preferably of a mild solution of AgNO_3 , to the inflamed areas of mucous membrane. General hygiene is of great importance, and preparations of iron are often useful. Copaiba, cubebs, and sandal-wood oil are sometimes of assistance, sometimes not. Their beneficial effect is soon manifest if they are of service in any particular case, otherwise they should be discontinued. Very essential are abstinence from alcohol and sexual excitement. Subsequent treatment should be continued until all mucous shreds disappear from the urine, for these are significant of areas of potential inflammation which, by reason of causes ordinarily inefficient, may at any time become actual.

The portion of the canal which shows the most marked tendency to contract after division is the meatus, and it is often extremely difficult to prevent this. The best method of obviating this tendency is to use a sharp knife, and to cut the orifice to as large a size as possible without producing hypospadias. A bit of lint smeared with carbolized vaseline should be kept in the wound of the meatus, being removed during micturition. The pain caused by micturition after the operation may be mitigated by immersing the penis in hot water during the act.

The dangers to life from internal urethrotomy are,—

- (1.) Hæmorrhage.
- (2.) Suppression of urine.
- (3.) Pyæmia.

(1.) *Hæmorrhage.* This is rarely of any consequence, and if detected is always to be controlled by pressure with ease if the incisions are anterior to the membranous urethra. Hence the necessity for limiting the use of the urethrotome to strictures which are anterior to this, and the reason for keeping the patient in bed and under observation for some days. Pressure may be applied to the fixed portion of the urethra in two ways, either by the application of a T bandage made of rubber and properly padded, which is fastened to a belt around the waist, or by a crutch, the cross-piece of which, well padded, is placed in the perineum, while the other end rests against the foot-board of the bed. The patient straddles and bears down upon this, exerting in this way pressure upon the deeper portion of the urethra. If the bleeding comes from the pendulous portion of the canal a simple bandage, with side splints, around the penis is sufficient, or the penis may be compressed between the abdomen and the T bandage mentioned above. The introduction and retention for a short time of a full-sized sound is sometimes effectual in arresting slight oozing of blood from the canal.

(2.) *Suppression of Urine.* To be looked for only in such cases as are complicated by renal disease. The urine of every patient should be examined before operating so that one's eyes may be opened to danger, and the possibility of its occurrence be taken into account. If casts and albumen be present in the urine the diseased condition of the kidneys is obvious enough, but pyelitis, which is the common source of danger in operations upon the urethra, is sometimes very obscure and difficult of detection, being often complicated and masked by vesical disease.

Prophylaxis, such as it is, consists in preparing the patient for the operation by rest, sedatives, quinine, and diuretics.

Actual Treatment. The skin and intestines should be made to supply the place of the kidneys for the time being so far as possible. This means hot baths, and pilocarpine, and hydrogogue cathartics. This direction of treatment was well indicated in one of our own cases where during the time, thirty-six hours, in which there was suppression of urine, there was copious and spontaneous diarrhoea, which ceased as soon as the kidneys resumed their function. Unfortunately the above drugs besides their specific action have a very depressing effect, and this fact should not be forgotten. Counter-irritants over the kidneys are supposed to be of use in relieving the congested condition of those organs which very likely exists during suspension of their functional activity, and stimulants should be given in order to support the patient.

(3.) *Pyæmia* is a question of hospital influence and cleanliness of instruments. The urethrotome is an instrument very difficult to clean and keep clean. The best method of cleaning it is to boil it in water after each operation. If the urine is foul and ammoniacal by reason of cystitis antiseptic injections are of use.

The unpleasant complications of this operation which are not dangerous to life are, —

- (1.) Urethral chill and fever.
- (2.) Urethritis.
- (3.) Chordee and curvature of the penis.
- (4.) Periuethral abscess.

(1.) *Urethral Chill and Fever.* This chill is not very uncommon. It is usually single, and is a source of annoyance rather than of danger. Coming on after one of the first acts of micturition, generally within thirty-six hours of the operation, it is followed by a considerable rise in temperature as high as 103° F. to 104° F. This febrile condition lasts a few hours and gradually subsides, with profuse sweating, and there is no repetition of the attack.

Prophylaxis consists in rest in bed before the operation and the administration of diuretics and quinine.

Actual Treatment. During chill, heat and stimulants. For the febrile condition acouite is the best drug, combined with morphia if a sedative is required.

(2.) *Urethritis.* This is to be avoided by reducing any existing urethral discharge to a minimum before operating. As little violence as possible should be done to the urethra in operating, which means employing a sharp knife, not using the instrument as a divulsor, and making as few cuts as possible. The subsequent application of cold, in the shape of a cold water coil around the penis, is useful in preventing both bleeding and urethritis. The latter is to be treated by the application of hot water, and if the urethritis is septic in character, by the retrograde injection of some antiseptic wash, or by the introduction and retention in the urethra of iodoform bougies. Of course, during the existence of urethritis instruments should not be passed into the urethra, and acute inflammation of the canal after the operation is apt to destroy the chances of good to be derived from the latter.

(3.) *Chordee or Curvature of the Penis.* A certain amount of chordee is present in almost every case. It begins on the fourth or fifth day and lasts from two to three weeks, being a source of annoyance to the patient. It corresponds in duration and severity to the urethritis present, and is to be avoided by keeping the latter at a minimum.

(4.) *Periuethral Abscess.* An uncommon accident,

of which we have had no experience. Bevan, of Baltimore, reports four instances in a series of two hundred cases of this operation. It should be treated on general surgical principles.

In comparing Otis's operation with other methods of treatment for urethral stricture, the following remarks suggest themselves: —

Divulsion is undoubtedly a safe operation and is temporarily very effective, but it is open to adverse criticism. It is a rough and indiscriminating application of force which does not recognize the individuality of the urethra. That one urethra differs from another in calibre, and that the average calibre of the urethra is larger than the largest-sized divulsor which is in ordinary use are already demonstrated facts, and by reason of these facts it follows that many strictures will remain incompletely divulsed, and therefore inadequately treated by this operation. The wound, also, made by the divulsor, is a tear, the extent and direction of which are entirely out of the control of the operator, being probably determined more by the size and physical peculiarities of the stricture than by any other factor. The operation is much more efficacious in strictures of small calibre than in those of large size. Such a lacerated wound of the urethral mucous membrane, in cases of small stricture, is likely to be transverse as well as longitudinal, and to result eventually in that for which it is but a temporary remedy, namely, stricture of the canal. After divulsion it is as necessary for the patient to introduce an instrument for an indefinite period of time, as after treatment by gradual dilatation.

It is precisely these faults which are avoided in Otis's operation. In each case the work done is graduated exactly to the predetermined and individual size of the urethra, and a longitudinal incision is made through the stricture which has been put on the stretch in order that it may be more completely divided. It has been clearly demonstrated by Reybard, who was the first to use a dilating urethrotome, that longitudinal incisions in the urethra do not of themselves result in stricture of the canal.

It is interesting in this connection to note an extract from the report of the committee who awarded the prix d'Argenteuil to the treatise of Reybard upon Urethral Strictures, Paris, 1853. "M. Reybard has been led to adopt this method of operation by the study upon animals of the method of cicatrization of longitudinal wounds of the urethra. He has established the fact that such wounds, when prevented from reuniting, give rise to the formation of a cicatrix, — smooth, thin, and non-retractile, — which, in adding itself to the walls of the urethra, augments its calibre. The importance of this experimental fact has obliged your committee to neglect nothing which was necessary to prove its truth; it has therefore repeated the experiments necessary to demonstrate it."

Two dogs, whose urethras had been subjected to longitudinal incisions, were killed at the end of three and four months. The results of the examination of the parts which had been subjected to operation are as follows: "At the site of operation, a smooth, white cicatrix, two and a half centimetres long, one centimetre wide, and resulting from the separate cicatrization of the two surfaces of the wound. The urethra presented at this point a notable enlargement."

In addition to the above, confirmatory evidence in the same direction is afforded by the details of three

autopsies upon the human subject who had been subjected to internal urethrotomy, reported by M. Perrin.¹

First case, autopsy three years after operation: Stricture at the bulbous, and spongy junction; the stricture tissue was present at the autopsy, thirteen millimetres long. It was dense and fibrous. . . . The incision was plainly to be seen; the lips of the wound were still separated; they were thick, rounded, and fibrous, and slightly adherent to the subjacent tissues. The floor of the wound was occupied by a thin, supple tissue, perfectly distinct from the strict tissue.

In two other cases death occurred in twenty-three and forty days after operation. In the first there was no sign of inflammation or of induration. Under the microscope it was seen that mucous membrane had not been reproduced, and that the connective tissue covering the wound had no epithelial lining. In the second the surface of the wound was covered by mucous membrane.

The calibre of the urethra may be determined by the use of the urethrometer, or if this cannot be done on account of the small size or great number of the strictures present, a sufficiently accurate guide to the size of the canal is the relation which exists between it and the circumference of the penis, as first pointed out by Otis. The rule is this, that a penis of three inches in circumference possesses a urethra which, when fully distended, is of thirty millimetres calibre, and every increase of a quarter of an inch in the circumference indicates two millimetres increase in the size of the canal. It is surprising how constant this relation is, and in the many urethras which we have examined the variations from the rule have been that the calibre of the urethra was in reality larger than indicated by the circumference of the penis. Otis's instrument can only be used when the strictures to be cut have a calibre of fifteen millimetres or more, and if the contractions are smaller than this they may either be enlarged to this size by gradual or continuous dilatation, or immediately cut with Maisonneuve's instrument, Otis's instrument being used to complete the operation. The meatus has to be enlarged in almost every instance, it being nearly always much smaller than the rest of the canal. In 281 urethras examined with relation to this point by Otis and Weir, of New York, and Gross, of Philadelphia, the average size of the urethra was found to be 32.3 millimetres, that of the meatus 24.5 millimetres.

The chances of serious constitutional disturbance and danger to life in consequence of operations upon the urethra depend much more upon the condition of the patient than upon the method of operation. We cannot here do better than to quote the late Dr. T. B. Curtis upon this point, who, in an article upon *The Significance of Frequent Micturition*,² says, "A correct and complete diagnosis is of the highest importance for prognosis, since the success of all operations upon the bladder or urethra, whether for stone or for stricture, whatever procedure be employed, is strictly and almost exclusively dependent upon the degree to which the kidneys and pelvis are implicated. Operations for stone or for stricture scarcely ever prove fatal unless the condition known as surgical kidney, consisting

in an inveterate suppurative pyelo-nephritis, be present. Nevertheless, however valuable a correct knowledge of the condition of the kidneys would be in such cases, we are generally forced to content ourselves with presumptions based upon the long duration of the primary disorder and the general condition of the patient. Among the most ominous signs of deep-seated mischief are polyuria, 'urinary dyspepsia,' and a liability to chills and fever, occurring with or without apparent cause." The above statement by Dr. Curtis places the matter in its true light, and it is unfortunate that the class of cases of which he speaks are very often those in which the necessity for some operative interference is imperative.

We have been at the pains to examine the surgical records of the Massachusetts General Hospital for the past ten years with reference to the frequency of constitutional disturbance during treatment for stricture, with the following results: In forty-seven cases of stricture treated by gradual dilatation there was one death, and constitutional trouble in 36.17 per cent., or in seventeen of the cases. In 113 cases treated by divulsion during the same period of time there were two deaths, and constitutional disturbance in 26.6 per cent., or in thirty cases. The average length of time for which these cases of divulsion were confined to the hospital was sixteen days. The number of cases treated in any other manner were too small to be worthy of notice. In the series of cases taken from the Massachusetts General Hospital records one point is worthy of notice, namely, that treatment by gradual dilatation was productive of constitutional disturbance in a larger proportion of cases than treatment by divulsion. Indeed, it is not rare to see cases recover without an unfavorable symptom after divulsion or internal urethrotomy which have previously suffered from severe general symptoms during treatment by gradual dilatation. It seems as if nature, irritated by impotent meddling, protested against such treatment until relieved by some more radical proceeding. This holds true more especially of small and numerous strictures of long standing where there is either retention or much difficulty in urination, and which are very likely complicated by renal disease. In such cases, where gradual dilatation produces attacks of chills and fever, repeated at each introduction of a bougie, this method of treatment should not be persisted in, but divulsion or urethrotomy should be done at once. There is nothing to be gained by delay, and the more radical methods of attack will, without increase of danger, which is always present in such cases, afford the most speedy remedy. An analogous relation holds between old-fashioned lithotripsy as done in several sittings, and Bigelow's operation, which affords immediate and permanent relief. In cases of stricture of large calibre uncomplicated by disease, and where there is no manifest dysuria, the converse of the above is probably true, and internal urethrotomy causes constitutional disturbance in a larger proportion of cases than would gradual dilatation. In these latter cases, however, the urethral chill and fever are not of serious import, and are to be regarded as an unpleasant incident rather than a serious drawback to an operation which offers fair promise of a permanent cure. The exact nature of this urethral chill is not known. It is possibly of purely nervous character, and is never accompanied by suppression of urine or any untoward consequences.

In one case to which Dr. C. B. Porter has kindly

¹ De la Valeur de l'Urethrot. Interne, Gazette des Hopitaux, June and July, 1865.

² Published in the Boston Medical and Surgical Journal of November 25, 1880.

allowed us to refer, where a slight operation upon the urethra was followed by an attack of this kind, the urine upon examination was found to contain large quantities of a well-defined and handsome specimen of bacillus. A catheter had been left in the bladder after the operation in the above case, but at all events, the concurrence of the attack of chill and fever, with the undoubted presence of micro-organisms in the urine, is suggestive.

Internal urethrotomy being unsuited to strictures situated posterior to the bulb by reason of uncontrollable hæmorrhage sometimes occurring and working back into the bladder, they are if of small size well treated by divulsion, although for such strictures external perineal urethrotomy is now being regarded with more favor than formerly. In the latter operation bleeding is under control, and the operation itself dangerous to life only in cases where any interference is dangerous. This operation owes its comparatively high death-rate to the fact that it has usually been done only in the desperate cases of tight stricture of long standing. Moreover, deep strictures, if of large calibre, are often particularly amenable to treatment by gradual dilatation. There is evidence, however, to show that many of them are spectres conjured up by the presence of anterior strictures of greater or less calibre, and thus their relative numerical importance becomes diminished. In every instance all anterior constrictions should be thoroughly removed before attention be given to the deeper ones, which may then vanish as if by magic. Our own limited experience also, as far as it goes, confirms the statement that by far the largest number of strictures are situated in the anterior portion of the urethra within four inches of the meatus; in other words, that deep strictures are comparatively uncommon. The cases which we have collected, so far as they go, illustrate how unnecessary it is to leave a catheter in the bladder after operation for stricture. Whether we would have had a smaller proportion of chills if we had done so is of course a mere matter of speculation, but the retention of a catheter in the urethra does not prevent the contact of urine with the wounded surfaces. If this be so it is worse than useless by the mechanical irritation of its presence, tending to cause urethritis and affording to micro-organisms a direct route to the bladder.

There is no one kind of treatment which is equally adapted to all cases, and a fair comparison of the different methods of treatment is only to be attained by taking into consideration the character of the cases as well as the method of operation. Like every other diseased condition stricture is more amenable to treatment of any sort when of recent formation, or generally speaking of large calibre, but in any case it is probable that complete division of the stricture tissue by means of the knife offers the best chance of a permanent cure. Sir Henry Thompson says in the Jacksonian prize essay upon Stricture, "I am disposed to think at present that a well-performed internal urethrotomy is more enduring in its results than any other operative procedure."

Treatment is modified in each instance by many attending circumstances, by the physical condition and idiosyncrasies of the patient, by his mental attitude towards the knife, and by the character, number, and situation of the strictures present.

We wish to be considered as reasonable advocates of internal urethrotomy as done by Otis's method, — an

operation worthy of more attention than has been given to it in Boston, an operation not proper in all cases, nor always successful, but one which, when rightly done in suitable cases, is the one of all others which, without danger to the patient, brings to him the most speedy relief and the best chance of a radical cure.

In concluding, we wish to express our thanks to the Sister Superior of the Carney Hospital for the excellent care and attention which have been bestowed upon our patients, and to Drs. Devine and Hall for their kind and intelligent management of the cases while under their care.

REPORT OF A CASE OF MURDER.¹

BY A. ELLIOT PAINE, M. D., MEDICAL EXAMINER.

ON the morning of September 26, 1879, I was called to Bridgewater to view the body of a man found dead in his house. I drove down, and, with one of the selectmen of the town, went to the house and found the dead body of Justin L. Gunn lying on the floor of a small bedroom, about eight by ten feet. The body was face downwards, with shirt and drawers on, in a mass of dried blood. There was no carpet on the floor, the only furniture in the room being an old-fashioned corded bed. There was one window on the side of the room, near the foot of the bed, and a door just at the head of the bed; there was another door at the opposite side of the room. The bed was in the corner of the room, so that it came near the door; the foot of the bed was drawn away from the wall about twelve inches; the bedclothes were thrown backwards, and the front part of the bed was depressed, showing that some one had lain there; the pillow and depressed portion were saturated with blood; the head-board and the walls, ceiling, and door, were spattered with blood. On investigation I learned that the deceased and his son had been living in the place a few months, carrying on a farm; that both had their splees, and quarreled often. The son had remarked he would "fix the old man some day." The neighbors had last seen the murdered man on the evening of the 24th of September, about ten o'clock. He was then alone in the house. Nothing was seen of the father and son on the 25th, and it was supposed that they had gone away. On the morning of the 26th the neighbors noticed the cows had not been tied up, and were uneasy and noisy. The neighbors then looked around the premises; found the doors fastened. On looking into the bedroom window they saw the blood on the wall, and gave the alarm. In a sink in the room adjoining the bedroom, used as sitting and dining room, there was a small cabinet in which papers, etc., were kept. It had been broken open, and near it was a large screw-driver with blood on it. I did not examine the body at my first visit, but locked the house, and left it in charge of a neighbor, and sent a telegram to the district attorney asking for detectives. I also learned that the son was seen on his way to the railroad station (about three miles from the place) on the morning of the 25th of September.

In the afternoon of the day of the view, after getting authority to make an autopsy, I went to the house accompanied by the district attorney, and with the

¹ Read before the Massachusetts Medico-Legal Society, February 7, 1883.

assistance of Drs. Pratt and Sawyer I made a thorough examination.

On the pillow were a few small pieces of bone and brain substance. On the mattress, between the head-board and pillow, was a piece of bone about half an inch wide and an inch long. Hanging to the outer head-post was a pair of trousers (or overalls); one leg was quite bloody, and sticking to the cloth was a piece of bone about one inch wide and an inch and a half long. The head of the body was just under the edge of the bed, with the legs extending to the wall; one leg was drawn partly up, and one arm was under the body. I turned the body over, and found the nose flattened. We then removed the body to another room, and made the autopsy with results as follows:—

External appearances. The head and upper part of body were covered with dry blood. There was a large wound on the right side of the head, above and in front of the right ear, measuring three and three quarters by two and a quarter inches; from this wound brain substance was protruding. Another wound in the right frontal region measured two inches in length, and extended across the forehead. There was also a triangular wound, three fourths of an inch long and one fourth of an inch wide, just above the right eyebrow. No other wounds were found on the body. Rigor mortis was well marked, as was the cadaveric lividity on the front of body.

Internal appearances. On turning back the scalp a blood clot was found covering the whole right side of the head. Under the wounds were found fractures of the skull corresponding with the wounds. A number of loose pieces of bone were removed, one piece extending from lower part of large wound downwards, and in front of the right ear, measuring four and an eighth inches by one and a half inches. A fracture of the skull was found extending from the upper part of the large wound on the right side of the head towards the left ear, in a triangular shape, three and a half inches. On removing the skull the membranes were found destroyed under the large wound, and the whole right hemisphere was covered with a clot of blood. The larger part of the right hemisphere was lacerated. The rest of the brain was normal.

There were old pleuritic adhesions of the right lung in its posterior portion, and of the left at the apex; otherwise the lungs were normal, as were all other organs.

The cause of the death was thus determined to be a compound comminuted fracture of the skull, the result of violence. It was our opinion that the man was killed while lying on his left side in the bed; that he must have received a number of blows at the large wound to produce such a destruction, and that the blows must have been given just as the assailant came through the door of the bedroom, and in all probability were made while the victim was asleep, there being no signs of a tussle.

Some three weeks after this the son was arrested, when he confessed that he killed his father. He said that on the night of the 24th of September he (the son) came home about half past ten or eleven o'clock. His father began scolding about some work; from words they came to blows; his father struck him with the screw-driver, and then went into the bedroom. The blow so angered him (the son) that he went to a back room and got a hatchet, and going into the bedroom, as his father was sitting on the edge of the bed, he

concealed the hatchet, and as he passed he struck his father on the head twice or three times. The father fell over on the bed, and he did not strike him again. He saw what he had done, and threw the weapon into a pile of wood (where it was found by the officer), and broke open the cabinet expecting to find money. He then changed his clothes, taking about half an hour. He then left the house and went into the barn, where he slept over night. He drove the cows to pasture in the morning, and took the cars to Boston.

The case was tried at Plymouth in the spring of 1880. The son testified to the same facts as he had previously confessed. On cross-examination he said that his father was on the bed groaning when he left the house; that he did not put him on the floor. The medical expert for the defense said that the man could have lived as long as was testified, and had voluntary motion enough to throw himself out of bed. It is to be remembered that where the body lay in bed it was several inches lower than the edge, and the body was found with the head under the edge of the bed, and the trunk and feet away from it.

The government attorneys claimed that the man was killed in bed; that before leaving the house the son dragged him out of bed, and drew the foot of the bed out from the wall so that the body could not be seen from the windows, either at the foot of the bed or through one in the dining room opposite the door in the bedroom (a table being in the way). The son was found guilty of murder in the second degree, and is now at Concord. He said, when sentence was passed, he preferred death, and as the officer left him a few minutes on the morning of his leaving the jail he cut his throat, making five cuts; being in too great haste he did a poor job.

REPORT ON LAWS REGULATING THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA.¹

BY RICHARD J. DUNGLISON, M. D., AND HENRY O. MARCY, M. D.

THE progress made in the legislative restriction of medical practice in the United States since your committee was appointed, three years ago, to report upon the subject, has been both notable and salutary. At that time the propriety of establishing such laws was under active discussion, and weak enactments, temporizing in character and but partially effective in their action, were evoked from tardy and timorous legislators in several of the States of this country, as compromises between a sense of the necessity of doing something to protect the health of their constituents and a consciousness that the practitioners and supporters of quackery and of irregular methods of medical treatment were among the influential voters whose active opposition might jeopardize their reelection. It was also found to be impossible, in a few of the States, to establish regulations for the practice of medicine which would be shaped to the wishes, principles, or prejudices of those members of the legislatures who believed that they themselves were occasionally benefited by prescriptions that were not wholly scientific in their character, or by remedies that had acquired their reputation by extensive advertising of their supposed merits and efficacy. The legislation of the last year or two, however, seems tending to greater stringency, and to

¹ Report of a Committee read before the American Academy of Medicine at New York, October 10, 1883.

more adequate provision for the regulation of medical practice. Several States which had hitherto but feeble legal enactments, or possibly none at all, have, since our last report, adopted measures that will probably be found to be effective in their working and conducive to the public welfare. The excellent laws now in force in West Virginia and Illinois have been taken as models, and although it has been found impossible to imitate them exactly, on account of local obstacles and local prejudices, the wedge has been entered, and some good results must inevitably attend the enforcement of the law. A letter recently received from Dr. Millard, the secretary of the State Board of Minnesota, a State which has adopted restrictive enactments since the last annual report of your committee, summarizes the general aspects of the best of these laws; and we may quote his remarks upon their provisions as particularly appropriate in this connection, especially as he has given the subject of medical legislation close study and attention:—

"I think," says Dr. Millard, "the law or 'acts' now in force in West Virginia, Illinois, Minnesota, and Missouri, the best, by far, extant in any of the States. These four States are governed by virtually the same law, and have a constituency of at least 15,000 physicians. Each act gives the Board the power of deciding the diplomas of what schools they shall recognize, and of revoking the certificate of any practitioner for unprofessional conduct; also the power to grant licenses to non-graduates by passing the necessary examination to test their fitness. You will observe that the main features of the law of these four States make the Board the censors of the different medical schools, as well as the professional conduct of those practicing within the jurisdiction of the different Boards. It is claimed by the enemies of this act that it constitutes a 'medical autocracy' of the Board, and that it may use its power very unjustly. There is no doubt that, if the act is administered by unfair men, this criticism is true. It is, however, noticeable that outside of a few 'commercial' medical schools, the law gives the greatest satisfaction, and I have not heard a whisper of complaint. The profession in general, and a few of our leading medical institutions, recognize that this country is flooded with incompetent medical men. That the time has arrived to cry, halt! all will assert, but as to the means of bringing about the halt there is a great difference of opinion. That it will not be brought about by the colleges themselves the profession is satisfied, after the last ten years' agitation of the subject, and the example set by Bellevue and some others. In appealing to legislatures to regulate this evil, I think the correct law should compel *all parties* to submit to an examination before practicing in the State. Such legislation is, however, impracticable now, and next to this I think the acts of the States I have mentioned the best."

Whatever the character of a legislative enactment may be, the benefits to flow from it will necessarily depend upon the manner in which it may be enforced. . . . "Much disappointment has been expressed by physicians in Pennsylvania, as well as in New York, at the operation of the Registration Act, it being claimed that the practical result is that, instead of elevating the profession above irregulars and charlatans, it has degraded the regular practitioner to the level of any one who can register under the act, however unworthy he may be to be in the ranks of the medical

profession. It seems more than absurd that a physician may commit a crime that will render him in the eyes of the law unworthy to exercise the franchise of a freeman at the polls, and yet no bar exists to his continuing in practice, and no means are provided to annul or deprive him of the diploma he has dishonored."

The Mississippi State law, which was adopted in 1882, is stated, by an earnest observer in that section of the country,¹ to be on a par with that of Illinois, in its efficiency and practical working, and is said to have accomplished already all that its most sanguine friends could have expected. To quote his own language, "All practitioners in the State, as far as I am aware, of every grade, have cheerfully complied with all its requirements. . . . The pile doctors, down to the Indian doctor tramping around with his banjo and his calico gown, have given us a clear field. Their places are vacant, and their voice is heard no more in the land. Thus, already, in one season, thousands of dollars have been saved to the people of the State, to say nothing of other benefits."

As we must necessarily refer frequently to the conspicuous labors of the Illinois State Board, in any report intended to illustrate the operations of State laws for the relief of the public from the operations of unlicensed or legally unrecognized practitioners of medicine, in its various departments, we must briefly allude, at this moment, to its numerous refusals to extend its privileges to unworthy applicants for its recognition, and at the same time signify our appreciation of its efforts in a direction well worthy of our recognition as Fellows of the American Academy of Medicine, the attempt to secure a common examining board on preliminary education for all the medical schools of Chicago. To still further perfect its work, an effort was recently made in that State to secure the passage of a law which would rid the community of advertising and lecturing quacks.

A direct service to the medical profession throughout the country is being at this very moment executed by this Board, and especially by its very efficient and energetic Secretary, Dr. John H. Rauch, in the publication of an elaborate pamphlet on Medical Education and the Regulation of the Practice of Medicine in the United States and Canada, in which are embodied at length the details of all the laws now in force in the various States and Territories of the Union and in the Provinces of the Dominion of Canada. Each is herein represented in its present attitude, up to the very latest possible date of practicable information, and in numerous instances the opinions of official authorities as to the efficiency of the law are appended. Not only is the present phase of medical legislation thus made apparent at a glance, but medical education is portrayed, in the brief analysis of the course of instruction, requirements, etc., of each medical school recognized by the Illinois State Board, including, of course, all other colleges of the country which have a reputable standing through their chartered existence in each State. At the meeting of the Council of the American Academy of Medicine, in Philadelphia, in October last, the importance of such a work was so seriously recognized, as an outcome of the slight efforts in this direction made by your committee in their annual reports, that the secretary of the Academy was instructed to approach some of the leading publishing

¹ Dr. J. M. Taylor. Miss. Valley Med. Monthly, February, 1883

houses with the view of giving to the profession, as one of the labors of the Academy, a work that would embody all the laws regulating medical practice as they existed at that time. Fortunately an enterprising public body, the State Board of Health of Illinois, and its enthusiastic and valued Secretary, have now done what the publishers could not regard as a safe commercial venture, and the profession and public will doubtless be more liberally benefited by that more general mode of distribution. The good work thus executed by the Illinois Board will be the accepted authority for the profession on all points relative to medical education and practice in the United States.

It is not contemplated by your committee to enter into the details of the new laws enacted since the presentation of their last annual report. It may be briefly stated that the following States and Territories are now in the possession of laws, of various degrees of force and effectiveness, regulating the practice of medicine: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Vermont, Virginia, and Wyoming. Canada has laws in operation in the Provinces of Manitoba, New Brunswick, Nova Scotia, Ontario, and Quebec. The States and Territories in which legislation has been established since the last annual report of this committee are Delaware, passed April 19, 1883; Michigan, which went into effect September 7, 1883; Minnesota, approved March 6, 1883; and Missouri, in effect from July, 1883. All of these recent enactments have elements to be commended, and if strictly enforced will undoubtedly command success in their execution. Of the States above mentioned in the general list, a few have weak and temporizing provisions. Pennsylvania still lags behind her sister States; her Legislature is content, for the present, with having adopted a simple registration law, which may have, and doubtless has, already accomplished a certain amount of good, and this has been accepted as the only present attainable and possible substitute for the stringent and restrictive measures which the profession and the public so urgently desire.

Of the peculiarities of construction or operation of some of the laws now in force much might be written in commendation or criticism; but the limits of this report render their recapitulation wholly impracticable. Sufficient is it to point out a few of these, in elucidation. In Alabama, for example, the diplomas of medical colleges confer no right to practice medicine in that State; the applicant must be actually examined by a board appointed for that purpose. In Arizona and Pennsylvania, and in Washington Territory, the law is simply for purposes of registration; in Arkansas a bill providing that all practitioners should be graduates of reputable medical colleges failed this year to pass both houses of the Legislature, and county boards of medical examiners, appointed by county judges, who may not be competent to decide as to the professional qualifications of their appointees, still continue to give certificates to applicants for permission to practice medicine in that State. Connecticut's very brief law is mainly intended for the punishment of itinerants. In Kentucky the law is a dead letter except in a few counties, and in Texas and Nebraska it is weak and ineffective.

Our Associate Fellow, Dr. Piffard, considers the New York law a good one, but that it has one important defect, in that a perjury in registering is only punishable as a misdemeanor, and not as a felony. Oregon has had a bill before the Legislature every year, for ten years past, but it has not yet succeeded in attaining so desirable a consummation. In Tennessee, which has no law of this kind, the practice of medicine is said to be free to all; according to the authority of the Secretary of the State Board of Health, "Indians, Negroes, confidence men, and all that ilk, ply their trade, with no restrictions whatever. Any man who claims to be a doctor is one; hence druggists who do not know enough to make a living turn out as doctors, in full practice, before you know it. A farmer boy, too lazy to plow, reads an old work on practice, or Every Man his Own Doctor, invests six dollars in drugs, and is a physician; and being a 'regular' we all consult with him. Our legislators will not touch, and our doctors are too timid to press, the subject, and so we languish in the old paths."

It may well be asked by us, as a committee watchful of the progress of the times, whether, in States like this, which have imposed no restrictions upon the unlimited and unbridled practice of medicine, the experience of nearly four centuries has seen any marked change from the days of King Henry VIII. to the present hour; ¹ for we read in the preamble of an act, passed in England in the year 1511, looking to the regulation of the practice of physic and surgery, that its enactment was rendered necessary by the fact that "the science and cunning of physick and surgery is daily, within this realm, exercised by a great multitude of ignorant persons, of whom the great part have no manner of insight in the same; some also can read no letters in the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomedly take upon them great cures and things of great difficulty, in which they . . . apply such medicine as be very noxious and nothing meet therefore, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the king's liege people."

Utah has shown her interest in medical legislation only by that provision of her penal code which punishes physicians who are drunk, and has been content with this measure of legislative protection of the people of that section of the country. A correspondent in Salt Lake City ² writes that "the inference is, that during the little time he is sober he will not do much harm. As for the medical fraternity proper, I do not think any of them care for any law regulating medicine. I believe they are advocates of the doctrine of the 'survival of the fittest.'"

Wisconsin might be placed in the list of those having a law to regulate the practice of medicine, but the title indicates that it is simply "An Act to prevent Quacks from Deceiving the People by assuming a Professional Title," and not really a law that may be classed in the same category as those mentioned previously.

In a letter recently received from Dr. Rauch, Secretary of the Illinois State Board of Health, the following interesting remarks are made by him:—

"The following States may be said to have good

¹ W. T. Bly. Early English Medical and Surgical Legislation. New York Medical Record, September 1, 1883.

² Dr. H. J. Richards. Report of Illinois State Board.

laws, namely: North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming Territory, Mississippi, Louisiana.

"Alabama requires *all* persons, both those holding diplomas, and those having none, to appear before the State or County Boards.

"North Carolina requires about the same, but the penalty for violation of the law is inadequate, and there is some complaint against it for that reason.

"The Mississippi law is new and cannot be well judged yet.

"After this year graduates of all colleges not complying with the requirements of this Board will be examined by the Board before being admitted to practice."

Such are the main points of interest connected with the progress of legislation in this country, which your committee have deemed it advisable to report. The facts there stated, in as comprehensive and condensed a manner as they have thought possible in their efforts to illustrate the progress of legal restrictions upon the practice of medicine, warrant them in expressing the view that commendable progress is being effected in this direction, and to entertain the belief that bright anticipation may be indulged for the future establishment of a healthy public sentiment that will in time protect the people themselves from the evils of irregular practice which they have blindly tolerated for so long a series of years.

PROGRESS IN DERMATOLOGY.

BY GEORGE H. TILDEN, M. D.

ALOPECIA FURFURACEA PRÆMATURA.

LASSAR and Bishop¹ published experiments which go to show that the ordinary alopecia furfuracea is an inoculable disease. The hairs which had fallen from the head of a patient suffering from this malady were mixed with vaseline and rubbed upon the skins of guinea-pigs and rabbits. The animals treated in this manner became bald, that is, lost their hair, in the regions of the body to which this mixture of diseased hair and vaseline had been applied. This condition of things began to be manifest about three weeks after the inoculation had been made, and the loss of hair was attended with desquamation. Hairs taken from these animals and rubbed into other and healthy animals produced a like result. Further particulars upon this subject were given by Lassar before the Berlin Medical Society.² Two examples of this disease were exhibited to the Society. Both the patients were young and exceptionally robust men, who for years had suffered from gradual and slowly increasing falling out of the hair of the head, attended by some itching of the scalp, and some desquamation thereof. Inoculation of hairs from the heads of these patients upon the skins of rabbits, guinea-pigs, and white mice had been sufficient to cause falling out of the hair in these animals. The above facts furnish ground for the assumption that this disease is locally infectious and inoculable, and to be treated by antimycotic methods. Opportunities for inoculation are furnished in plenty by the combs and brushes in use at barbers' shops, which, without any particular attention to cleanliness, are employed suc-

cessively upon different customers. Women are less subject to this affection than men, by reason of the fact that, as a rule, they dress their own hair and do not frequent barbers' shops.

The treatment recommended by Lassar is based upon the assumed character of the disease, and, although tiresome, appears to be efficient. The head is washed every day with tar soap or fluid glycerine soap for fifteen minutes, and the soap afterward removed by the liberal use of cold, followed by warm, water. A one fifth of one per cent. solution of corrosive sublimate is then thoroughly applied, the head dried, and into the scalp is rubbed a one half of one per cent. solution of B naphthol in alcohol. Finally the head is plentifully besmeared with about twenty-five grammes of a two per cent. solution of carbolic or salicylic acid in oil. This treatment must be followed with diligence for a long time. The first effect of treatment is apparent increase in the daily loss of hair, which, however, gradually diminishes, and in from two to three weeks ceases entirely, not to return, provided treatment is continued for some time longer. Eight weeks seems to be an adequate length of treatment in most cases, but even after this it is advisable to repeat the various applications once or twice a week for some weeks. In each one of fifty cases, inoculation of the disease upon animals was attended with success, and the foregoing method of treatment followed by good result. One case will serve as an example. In the beginning the amount of hair which was daily lost weighed 0.298 grammes; at the end of three months' treatment it weighed 0.0058 grammes. The reporter has found sulphur in an ointment containing ten per cent. to fifteen per cent. of the drug, as recommended by Unna,³ quite efficacious in the treatment of this affection.

PURPURA RHEUMATICA AND HEART DISEASE.

Schwartz, assistant in Kaposi's clinic, publishes⁴ two cases of purpura rheumatica complicated by acute insufficiency of the aortic valves. The patients were well-developed males nineteen and twenty-one years of age respectively. They were anæmic, and their only subjective sensations were general malaise and loss of appetite. They presented the characteristic eruption of purpura upon the lower extremities, the rest of the body being free. This eruption ran the usual course of purpuric eruptions, and disappeared in a few days after having gone through the characteristic changes of color, leaving behind pigmented spots. In each case the pulse and temperature were normal throughout the whole course of the disease. Physical examination gave no evidence of disease of any of the thoracic or abdominal viscera except the heart. In both instances there was evidence of aortic insufficiency, namely, a diastolic murmur of greatest intensity over the sternum and to the right of the sternum in the second intercostal space. In one case the second pulmonic sound was accentuated, and in both the jumping pulse of aortic insufficiency was to be felt. One case was seen after leaving the hospital, and evidence of compensatory hypertrophy of the left ventricle began to be manifest as early as four weeks after the beginning of the affection.

The fact that disorders of the heart may show themselves in connection with the various forms of erythema has been established by series of observations, and is

¹ Monatshefte für prak. Derm., July, 1882.

² Berlin med. Wochenschrift, No. 16. 1883.

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³ Monatshefte für prak. Derm., December, 1882.

⁴ Wiener med. Wochenschrift, No. 32, August, 1883.

already well recognized. This is true not only of erythema exudativum multiforme but also of erythema nodosum and purpura rheumatica, and is evidence of the correctness of Hebra's and Kaposi's opinion that in spite of the manifold and different appearances of these eruptions they are to be regarded as symptoms of various grades of one and the same pathological process. Lewin, in his article upon Erythema Exudativum Multiforme,¹ mentions thirty cases of erythema, which were complicated by disease of the heart, in a total of one hundred and twenty-six cases. In the course of erythema one finds, as a rule, merely systolic murmurs at the base and apex of the heart, which do not in every instance admit of a clear and satisfactory explanation. The question as to whether an anæmic or febrile murmur does not in such cases simulate organic disease of the heart remains an open one so long as subsequent manifestations do not establish the diagnosis. The fact that in many cases the different varieties of erythema are accompanied with severe pain in the joints has led many, especially of the French observers, to regard these erythematous eruptions as rheumatic in character, and the attending heart affection as due to rheumatism. However plausible the above may seem in cases which are attended with high fever and pain, instances do occur like the two reported, where without any evidence of rheumatism, either in the history, the subjective or objective symptoms, disorder in the heart accompanies the manifestations upon the skin. The author is of the opinion that such cases go to show that the connection between the symptoms on the side of the heart and those of the skin is an intimate and peculiar one, and not to be referred to rheumatism.

CAUSES OF INFANTILE ECZEMA.

Heretofore the causation of eczema in children has been mainly ascribed to scrofula,² and instances of this disease which were manifestly not due to this condition have been accepted without any definite hypothesis as to their origin. Without doubt scrofula is responsible for numerous cases of eczema in children, but it does not account for the variety of the disease referred to by the author,³ which almost without exception manifests itself within the first half year of life, often during the initial months thereof, and which reaches its highest development at a period of infancy when scrofula does not usually exist. It is only in exceptional instances that eczema due to its influence occurs thus early in life. Infants which suffer from eczema as a rule show no signs of scrofula. They are to all appearances perfectly healthy children, well developed, well nourished, and very fat, while the skin, save in the affected regions, which are almost always the face and head, is smooth, soft, and supple. These infants are, in fact, models of good nourishment and health, and the tormenting itching caused by the disease does not prevent them from feeding well, and they gain in weight and flourish. The only bodily function which is not well performed is the evacuation of the bowels, and such infants are affected with costiveness due to intestinal torpidity. The movement of the bowels is of infrequent occurrence, and the stools are hard and of a light yellow or gray color, showing de-

ficiency in bile pigments. These infants are examples of "polysarcia adiposa," or the superabundant and universal formation of fat tissue. Upon percussion and palpation evidence of fatty infiltration of the liver, in the shape of increased size and firmer consistence of that organ, is not wanting, and in such cases as die from some intercurrent and acute affection fatty infiltrated liver is found at the autopsy. Healthy infants are disposed to the overformation and accumulation of fat tissue by reason of their diet and their limited mental and muscular development and activity. The connection in these cases between the above tendency and the development of eczema is one of cause and effect, and so long as the conditions exist which determine this tendency of infants to the excessive production of fat so long does the eczema which is caused by it persist, now better, now worse, in spite of ordinary methods of treatment. In many such cases treatment is given up in despair and the disease allowed to run its course. At the end of the first or during the beginning of the second year of life, when there is more mental and muscular action, and after the change to a more mixed and nitrogenous diet has been made, this exuberant production of fat ceases, and the fatty infiltration of the liver disappears. At the same time there is spontaneous recovery from eczema and from the torpid and inactive condition of the bowels which so often accompanies it. Sometimes, although rarely, this overproduction of fat is prolonged into the third or fourth year of life, in which case the eczema dependent upon it also persists either continuously or in intermittent attacks.

Assuming proneness to obesity to be the cause of eczema in these cases, the method of treatment is immediately indicated, and consists in limiting the quantity of fat-forming food which is taken. The "Banting process" has already been used in England as a remedy for certain forms of eczema occurring in adults. The common errors in connection with infants' diet consist in giving too much food and in the exclusive use of fat-forming food, and are the points to be looked after in these cases of infantile eczema. The food should be given less often, in smaller quantities at a time, and between the meals, composed of milk or some equivalent therefor, other meals, of food less liable to produce fat, namely, various broths and soups, should be provided. Attention to the sluggish condition of the bowels is very important in these cases, and in many will be of itself sufficient to effect a cure. For this purpose preparations of rhubarb or the syr. rhamni cathartici are useful. The good effect of cod-liver oil sometimes seen in such cases is to be ascribed to its loosening action upon the bowels rather than to any antiscorbutic quality. The regulation of the diet is often a very difficult matter, but as a rule it is easier of accomplishment when children are brought up by hand than when they are at the breast. In particularly obstinate cases, which are possibly due to hereditary tendencies, or when infants are for some reason unsuited to any but an exclusive milk diet, the internal administration of arsenic is oftentimes useful.

Why infantile obesity should cause eczema is not clear, the same tendency in adults not being attended with any development of this disease. The author is disposed to look for the connection in the inactive state of the bowels, which is almost a constant factor in infantile obesity, and which is probably due to deficient secretion of bile by reason of fatty infiltration of

¹ Charité-Annalen, iii. Jahrgang, 1878.

² "La scrofule est le panier dans lequel on jette indistinctement toutes les maladies qui frappent les enfants de moins de quatorze ans, et dont on ne connaît pas la cause."

³ Bohn. Jahrbuch für Kinderheilkunde, Band xii, Heft 1.

the liver. Such constipation causes the retention of waste material and of the glandular secretions which accumulate in the alimentary canal, and it is this condition of things to which the development of eczema is due. The reason why this variety of eczema is almost exclusively confined in its manifestation to the face and head is supposed to be the great determination of blood to these parts required by the development and growth of the skull, its contents, and appendages.

THE TUBERCLE BACILLUS AND LUPUS.

The opinion of Friedlander that lupus is tuberculosis of the skin, an opinion based upon the identity in structure of the nodule of lupus and tubercle, has not as yet been generally accepted. Doutrelepont¹ was induced to examine specimens of lupus, with regard to the presence or absence therein of the specific bacillus of tuberculosis, by the fact that there came under his observation the case of a healthy man who suddenly died of basilar tubercular meningitis, the only possible source of infection being lupus of the face and extremities. Demme² had previously reported that in three cases of lupus he found in the nodules peculiar to the disease large numbers of tubercle bacilli. The most effective method of demonstrating the presence of these bacilli is stated by Doutrelepont to be excision of a portion of diseased skin, hardening it in absolute alcohol, and making sections through the lupus nodules with a microtome. These sections were colored by Koch's method, and put up in Canada balsam. Bits of skin taken from seven cases of lupus were prepared in this manner and examined, with positive result in every instance. The bacilli were to be seen scattered about and arranged in groups of a dozen or more, as a rule situated between the cells which made up the lupus nodules, also inside the cells. None were detected in the giant cells, but around these the bacilli were thickly gathered. Pfeiffer³ has also reported the discovery of the tubercle bacillus in two out of eight specimens which had been made from bits of lupus granulation taken from the conjunctiva of a young girl.

The investigations of Martin, Koch, and Cornil have demonstrated the fact that the introduction of bits of tuberculous matter into the peritoneal cavity of animals, guinea-pigs in particular, is always followed by tuberculosis of the peritonæum, which, as a rule, begins in the region of the spleen and becomes generalized in the peritonæum in about six weeks, resulting in well-marked pulmonary tuberculosis by the end of two months. Upon the supposition that lupus, if of tuberculous nature, would produce a like result, Leloir⁴ reported to the Société de Biologie the inoculation in this manner of fifteen guinea-pigs, each experiment having been followed by negative result. Six months later, in July, 1883, Cornil and Leloir presented to the same Society the results of the intraperitoneal inoculation of animals with lupus material as follows:—

Sixteen guinea-pigs were inoculated with material taken from cases of lupus vulgaris, and two with matter furnished by cases of lupus erythematosus. Of the first lot of guinea-pigs ten died or were killed some months after inoculation, and of these ten but three were found to be infected with tuberculosis. In two

of the animals in which inoculation was attended with success, the tuberculosis was general, and in the other were found tubercles only of the spleen and mesenteric glands, and in all three of these animals the bacillus of tubercle was found in quantities. Inoculation from the two cases of generalized tuberculosis upon other and healthy animals was attended with success in one instance, and from this last animal successful inoculation was also made. Of the two guinea pigs inoculated with material from lupus erythematosus, one died in one month, and was found to be affected with general miliary tuberculosis. The other lived, and three months after the experiment was in good health.

The micrococci which were found in lupus by Schüller⁵ are considered by Cornil and Leloir to be "mastzellen." These observers have also examined portions of diseased skin taken from eleven patients affected with lupus vulgaris, and have detected the tubercle bacillus in but one instance, in which case there was also evidence of pulmonary tuberculosis, while all the others were free from this disease. Their conclusion is that if the bacillus of tubercle is present in lupus, it is at all events extremely uncommon. The rarity of any positive result from the inoculation of lupus material, and the long period of time which ensues between inoculation and the manifestation of tuberculous infection as compared with instances where ordinary tuberculous material is employed, support them in this view and lead them to the conclusion that if lupus is localized tuberculosis, it is tuberculosis "tres atténuée."

The above communication to the Société de Biologie was followed by a discussion of which the following is a résumé:—

Bert said that it would be interesting to know whether the guinea-pigs in which the inoculation had been followed by negative results were vaccinated as regards tuberculosis.

Cornil replied that several of these animals had been preserved, and that it was his intention to inoculate them with the most virulent sort of tuberculous material.

Melassez stated that he had never detected the bacillus of tubercle in the specimens of lupus tissue which he had examined, and that the inoculation of lupus material, in the anterior chamber of the eyes of rabbits, had been followed by negative results.

Grancher thought that the experience of Cornil with inoculation of lupus was similar to that of Pasteur with charbon. The latter found that the inoculation of an infinitesimal quantity of the bacillus of charbon was followed by the evolution of this disease, but much more slowly than when larger quantities were used. According to Cornil the same relation held between the inoculation of lupus and of ordinary tuberculous material, and lupus might be looked upon as an attenuated form of tuberculosis. He considered this as further evidence of the identity of scrofula and tuberculosis. Scrofula he regarded as a variety of tuberculosis which manifested itself in special directions. He was skeptical as to the possibility of vaccination against tuberculosis.

Vidal, from a clinical point of view, was unwilling to allow the existence of any connection between lupus and tuberculosis. He thought that the differences between the ulcerations of lupus and those of tubercle, especially upon mucous membrane, were too marked to admit of identity in the two pathological processes.

¹ Monatshefte für prak. Derm., June, 1883.

² Berliner klin. Wochenschrift, No. 15, 1883.

³ Berliner klin. Wochenschrift, July, 1883.

⁴ Annales de Derm. and Syph., August, 1883.

⁵ Vide Derm. Report in this Journal, May 4, 1882.

Cornil thought that evidence sufficient to justify final judgment in this matter was yet wanting, and that the part of wisdom was to wait. Nevertheless he considered that there were grounds for hoping that inoculation of lupus material would serve as vaccination against tuberculosis. For this it was not necessary that the two processes should be identical. Vaccinia is far from being the same as small-pox, and yet its preventive action is incontestable. A similar relation may exist between lupus and tubercle.

Bert regarded this view as very likely the true one. After every inoculation of virus there ensues a struggle between the animal and the poison. This struggle may terminate either in the rapid death of the animal, which means the triumph of the micro-organism, or by the survival and victory of the animal. If the micro-organism is rapidly destroyed there is no struggle, so to speak, and no vaccination, but if the micro-organism remains in existence long enough to cause certain manifestations, in the latter case the animal may be considered as vaccinated.

Schuchardt and Krause¹ have examined, with special reference to the presence of the tubercle bacillus, a large number of specimens of "surgical tuberculosis" collected from Volkmann's clinic with successful results. Among these specimens, which comprised synovial and bone tuberculosis, tuberculous abscesses, in which bacilli were found in the lining membrane, but not in the pus contained therein, tuberculosis of the lymph glands, etc., there were three instances of tuberculosis of the skin and lupus.

Note by the Reporter. The identity in the anatomical structure of the nodule of lupus and of tubercle, taken together with the fact that the micro-organism found in each appears to be the same, furnishes strong presumptive evidence that lupus is localized tuberculosis of the skin. The supposition that lupus is cutaneous tuberculosis is not upset by the arguments which go to show that it has no special connection with inherited tuberculosis, it being found combined with the latter only in from ten to fifteen per cent. of cases. Human tuberculosis in any situation is usually a localized process which seems to find in the lungs the most favorable conditions for its propagation and development. The bacillus of tubercle is capable of evolution only under certain conditions of tissue and environment, within a narrow range of temperature. The conditions which obtain in the skin are manifestly hostile to its welfare as compared with those furnished by the lungs, and account for the uncommon occurrence of lupus and its extremely slow advance. The fact that lupus usually manifests itself early in life seems to indicate that the skin loses its susceptibility to the influence of the bacillus by age, or, in other words, furnishes less favorable conditions for its development. Such susceptibility of the skin must either be inherited or acquired, for it is evidently not common to all individuals. There is nothing to show that it is inherited, and everything is against this supposition, but the facts that in a large proportion of cases lupus is developed only in the neighborhood of cicatrices due to scrofulous disease, or upon mucous membranes already altered by catarrhal processes, and that in not a few instances injury or attacks of erysipelas seem to immediately precede the first appearance of the disease, signify that such peculiarity of skin and mucous membrane is acquired by reason of antecedent pathological

processes. The above facts were regarded by Raudnitz² as going to show that lupus is due to a localized specific predisposition, but in the light of recent knowledge they indicate an acquired and local predisposition to a special form of infection. It is certain, at all events, that such cutaneous susceptibility does not carry with it or imply predisposition to ordinary tuberculous infection, which manifests itself in the lungs. Experiments with animals go to show that the ordinary method of infection in pulmonary tuberculosis is by inspired air, and they also demonstrate the marked influence of local predisposition of the lungs in determining the situation of tuberculous infection. The common initial seat of lupus in the skin and mucous membrane of the nostrils would suggest the same method of infection as probably obtains in pulmonary tuberculosis, lupus, however, being exceedingly uncommon in comparison with phthisis by reason of the adverse surroundings which the skin offers to the development of the tubercle bacillus.

SKIN DISEASES OF NERVOUS ORIGIN.³

This book is a very interesting and valuable one, and indicates the tendency of recent investigation to seek for the pathogenesis of cutaneous disease in the labyrinth of neuro-pathology. Particular attention is given by the author to the sympathetic nervous system and its dependent vaso-motor and trophic nerves in their relations with affections of the skin. The first part of the book is concerned with the above system and its physiological and pathological connection with dermal disturbances, and the last portion is devoted to the consideration of skin diseases of a nervous origin, many interesting and instructive instances of which are given, while all that is known about them is presented. They are divided by the author into three main classes:—

- (1.) Vaso-motor affections of the skin.
- (2.) Tropho-neurotic affections of the skin.
- (3.) Idio-neurotic affections of the skin.

The work is of more value as coming from a trained dermatologist, a pupil of Hebra, and its only fault is the final attempt to arrange a classification of cutaneous diseases which is based upon their neuro-pathology. The author admits that it is merely an attempt, but inasmuch as *all* skin diseases are not due to, or accompanied by, changes in the nervous system, such a classification must always be incomplete and inadequate. A classification founded upon aetiology would no doubt be desirable, but in the present state of our knowledge the soundest basis for dermatological classification is pathological anatomy, not pathogenesis, and other systems, however praiseworthy as tentative though incomplete efforts towards the truth, are only to be regarded as such. The mania for classification which seizes upon dermatologists above other men is curious, but significant of the unsatisfactory nature of even the best system, which is that of Hebra and its various modifications.

— A severe epidemic of trichinosis is reported from Emsleben, Russian Saxony, the disease being said to prevail in eighty-four of the 134 houses in the town. A considerable number of deaths are reported.

² Vide Derm. Report in this Journal, October 5, 1882.

³ Die Neuropathischen Dermatosen, Dr. Ernest Schwimmer. Verlag von Urban und Schwartzberg, Wien., 1883.

¹ Berliner klin. Wochenschrift, No. 33, August, 1883.

Reports of Societies.**SUFFOLK DISTRICT MEDICAL SOCIETY.****SURGICAL SECTION.**

WILLIAM N. BULLARD, M. D., SECRETARY PRO TEM.

OCTOBER 13, 1883. The meeting was called to order at eight P. M. DR. D. W. CHEEVER in the chair.

INTERNAL URETHROTOMY BY OTIS'S METHOD.¹

DR. F. S. WATSON read a paper on Nineteen Cases of Internal Urethrotomy by Otis's Method, with Remarks.

DR. TILDEN stated that the experience of Dr. Watson and himself confirmed the statement that the larger proportion of strictures occurred in the anterior urethra, within five inches of the meatus. Within this region of the urethra there were two points where strictures were more common than elsewhere, namely, behind the meatus, within one inch of it, and at a region between two and a half and three and a half inches from the meatus, the latter region corresponding to the peno-scrotal junction. If fluid be forced through a flexible tube with collapsed walls like the urethra friction is caused, and this friction may be increased at any point either by diminishing the calibre of the tube at that point or by bending the tube, which is practically the same thing. This condition is just what exists in the urethra behind the meatus, which on the average is one fourth smaller than the canal behind it, and at the peno-scrotal junction where the urethra takes a sharp bend. The increased friction at these two points does no harm so long as the urethra is in a healthy condition, but as soon as inflammation has been set up in the canal it, in many cases, causes perpetuation of inflammation. This means the formation of granulation tissue, and granulation tissue eventually results in stricture. This seems to be the reason why strictures come first at these two points in the canal. After a stricture has once formed it may cause the formation of a stricture behind it, and in this way the urethra may be filled with strictures. The most important point about the operation is the avoidance of urethritis. Urethritis is bad not only as causing chordee, but also as imperiling the permanent good result of the operation. The wound made by the urethrotome is a spindle-shaped affair, which, if it heals without urethritis, becomes covered with a thin, soft, non-retractile cicatrix. If urethritis occurs a different and undesirable sort of cicatrix may result. The points in avoidance of urethritis are three: reducing any existing discharge to a minimum, which can always be done if time be taken; not using the urethrotome as a divulsor, as it is purely a cutting, not a tearing, instrument; and using perfectly clean instruments.

DR. GREENOUGH said that he considered that the necessity of after-treatment was usually not sufficiently insisted upon. He did not see why the tissue formed over the wound after Otis's operation should in any way differ from that produced by any other mode of operating. He then mentioned the case of a patient who had two very tight strictures, which, however, yielded well to dilatation. On account of special circumstances Maisonneuve's operation was performed. Three or four years afterwards, the patient having

neglected to pass sounds, recontraction occurred. Whatever method be employed recurrence is liable unless sounds are constantly used.

DR. TILDEN said that non-retracting tissue meant the absence of urethritis.

DR. WATSON referred to some observations on wounds resulting from internal urethrotomy by M. Maurice Perrin.

DR. GREENOUGH said that the paper under discussion was of interest in two points, namely, in regard to the value of the operation itself, and in regard to the indications for operating at all. He considered it very questionable whether it was often worth while to operate at all in the case of a healthy man. In any case the patient should never be assured of absolute freedom from danger in any of the operations. There is a great difference between private and hospital patients in regard to operating, and in private cases gradual dilatation was often the best mode of treatment.

DR. GARLAND spoke on the subject of the recurrence of strictures. The line which Otis draws between recurrent and non-recurrent strictures is that in the latter case the stricture has been completely cut through, in the former only partially so. If the section has been complete the stricture disappears, and nearly normal tissue is left, and this irrespective of the passing of sounds. The wound will in many cases heal kindly in ten days. If the stricture be not sufficiently cut there is great liability of return. Dr. Garland said that there was always danger in meddling with the urethra, and gave examples of unfortunate results and complications following gradual dilatation, among the latter swelled testicle and pericarditis. He considered cutting equally safe with dilatation.

DR. MIXTER showed several casts of the urethra made by Dr. Richardson and himself in both plaster and fusible metal. These show the shape and varying calibre of the urethra in its different portions. Near the meatus is the fossa navicularis, which is shown to be a shallow, well-marked pocket rather than a dilatation. Behind this the calibre is quite regular until the bulbous portion is reached, where there is a fusiform enlargement nearly twice the diameter of the urethra in front of it.

The membranous portion is the narrowest part of the canal. This is divided from the prostatic portion by a well-marked fold of mucous membrane, which is shown in a number of the casts, and which, starting on the under surface of the urethra, passes upward and forward to meet on its upper surface.

This fold seems to be quite constant, as shown by the casts made, though it is not described in the anatomies.

The prostatic urethra presents a considerable dilatation, triangular on section, the floor being marked by the caput gallinaginis. Diagrams of this portion of the urethra give but a slight idea of the shape of the cavity. At the point where the prostatic urethra joins the bladder is a well-marked constriction of the canal, which is here little larger than at its membranous portion.

DR. G. W. GAY stated that his experience of Otis's operation in his first three cases had been discouraging. In all symptoms of septicæmia or pyæmia had followed the operation. Since then he had used a modified form of the operation. He never measured the penis nor urethra. He used a curved bistoury in preference

¹ See page 385 of this number of the JOURNAL.

to the straight one. In the cases operated on by the modified method he had had no trouble. The after-treatment was important. One half to one quarter of a grain of morphia was given about half an hour after the operation, and quinine gr. x.-xx. within a few hours. Dr. Gay found a larger proportion of strictures in the membranous portion of the urethra than Dr. Watson had seemed inclined to admit. He thought that what was specially needed was some method for operating on deep strictures. If an ordinary stricture could be easily dilated he should hesitate to advise cutting: if the stricture were resilient or irritable cutting would be advisable. All strictures, however treated, do not recontract nor give trouble during the life of the patient.

With regard to the cases mentioned by Dr. Gay, DR. TILDEN said that it seemed to him that the reason that they had been attended with such bad results was that in these cases the instrument had been used as a divulsor, not as a urethrotome. The cases had been published, and according to Dr. Gay's description the strictures were first cut, and then the dilating instrument had been at once screwed up to the full size of the canal. This was divulsion in its worst form. In ordinary divulsion the force is applied equally in all directions, but in the above operation the force was applied in only two directions, one of which was already weakened by an initiatory cut. Such a wound might extend anywhere, and be good ground for pyæmia and the absorption of septic material, such as had happened in these cases.

DR. BRADFORD mentioned a case under his care operated upon by Dr. Tilden in which there was suppression of urine for thirty-six hours after cutting, though eventually there was a perfect recovery. The arteries in this patient were found to be atheromatous. If one takes into consideration the statistics of Dr. Weir from 500 cases Otis's operation may be regarded as safe as divulsion.

In answer to a question, DR. WATSON said that all well-organized strictures situated anterior to the bulbous portion of the urethra were suited for internal urethrotomy. The cases which gave especially good results from gradual dilatation he believed to be such narrowings of the canal as were composed of granulation tissue or of stricture tissue in its early stages of formation. The difference between the latter and those in a somewhat more advanced stage of formation often escaped observation unless they were carefully examined by the bougie à boule. The more irritable and resilient the stricture the more striking was the result by internal urethrotomy as compared with that by any other method. If one believed in the possibility of permanent cure of stricture by an internal urethrotomy, and admitted the impossibility of a permanent cure by any other method, his judgment would lean strongly toward the former method of treatment, even though there were an increased risk in the procedure, provided such risk were slight. The advocates of internal urethrotomy, however, deny the existence of such risk when the operation is properly performed.

DR. CHEEVER said that he believed that the causes which had operated against the performance of internal urethrotomy in this city were (1) because the operation had been performed with a curved bistoury, and (2) because no distinction between the deeper-seated and the more anterior strictures had been made, and consequently in many cases severe hæmorrhage had occurred.

The earlier operations for cutting preceded divulsion. In early days there were three methods of treating strictures,—gradual dilatation, external urethrotomy (Syme), and internal urethrotomy as practiced by the French surgeons. The latter was a bold operation, produced hæmorrhage frequently, was often fatal, and finally abandoned as unsafe. The operation as described to-night was reasonably safe, but when first introduced by Otis the precautions described by the reader were not used, no measurements were taken, there was no previous treatment, the operation was often performed in the surgeon's office, and the patient walked home afterwards.

The most important question in regard to the operations for stricture was the permanence of the results. Some strictures do not recontract, at least for a long time, as in a case described, where there was recontraction only after fifty-three years. Most patients improve after treatment, but finally neglect proper precautions and permit gradual recontraction.

In urethrotomy it is wiser not to retain the catheter. Fistula is apt to result, and it always causes irritation, while the urine escapes beside it. Most persons able to walk about can get on well with gradual dilatation unless they have an irritable nervous system and irritable urethra.

TANIA MEDIO-CANCELLATA.

The discussion on the preceding paper being closed, DR. GARLAND showed a specimen of *tania medio-cancellata*, with the head, which he had obtained by means of pelletierine, an alkaloid obtained by M. Turret from the bark of the pomegranate. A preparation of this is made, and the dose for an adult is a bottle which costs three dollars. Dr. Garland reported two successful cases in which he had used it.

AMERICAN ACADEMY OF MEDICINE.

THE American Academy of Medicine held its eighth annual meeting October 9th and 10th, at the hall of the New York Academy of Medicine. In the afternoon of the first day papers were read by Drs. TRAILL GREEN, of Easton, Penn., BENJAMIN LEE, of Philadelphia, CHARLES MCINTYRE, JR., of Easton, Penn., A. D. ROCKWELL, of New York, and A. L. GIBON, of the United States Navy.

DR. GREEN's subject was

THE INSUFFICIENCY OF TECHNICAL TRAINING AS A MEANS OF MENTAL CULTURE,

and he strongly advocated the study of the classics, mathematics, and the various branches ordinarily taught in the large colleges as an indispensable preliminary to purely professional education.

DR. LEE made a plea for the more general and thorough study of the subject of botany on the part of medical students; and the other papers (with the exception of Dr. Rockwell's, which consisted of an eulogy of the late Dr. George M. Beard) were devoted to a consideration of the best means for elevating the standard of the profession, and excluding from it ignorant and unworthy individuals.

In the evening

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before the Academy was delivered by the President, DR. H. O. MARCY, of Boston. His subject was, The

Recent Advances of Sanitary Science : the Relations of Micro-organisms to Disease; and it was illustrated by micro-photographs projected upon the screen. A considerable portion of it was devoted to the question of sewage in New York, Boston, and other large cities.

The first paper of the second day's session was by DR. L. S. PILCHER, on

THE RELATIONS OF MEDICAL JOURNALISM TO HIGHER MEDICAL EDUCATION IN AMERICA.

Before reading it he made some remarks suggested by the papers of the previous day, in which he opposed the strict interpretation of the principles upon which the Academy was founded, chief among which is the encouragement of classical, mathematical, and scientific training among those professing to pursue a course of medical study. There was no doubt, he said, that those physicians who lacked the advantages of general culture in youth regretted the fact, but it was not in the power of the Academy to decide that the avenues of advancement in the profession should be closed to all who had not attained a certain arbitrary standard of learning. Some men of college training made incapable physicians, and some men rose from the plow and the anvil to places of distinction as medical practitioners. To have made the humanities an indispensable requisite to a degree in medicine would have excluded such men as John Hunter and Sir Astley Cooper from the profession in which they won such imperishable fame. To be a scientist was not necessarily to be a good practitioner. Harvey's medical practice was the laughing-stock of London; while Sydenham, inferior as a scholar and savant, was incalculably superior in the practical work of curing disease. The discussion was continued by Drs. HUNT, of Boston, STEINER, of Maryland, GIHON and SIBBET, and closed by Dr. Pilcher.

DR. HUNT denounced the whole system of academic education as mediæval, inconsequential, and worthless. He was not a Fellow of the Academy himself, but he thought that that body was wasting its time in endeavoring to arrest a progress that was inevitable. College life was simply four years of play, which left a young man less fitted for professional study than he was before his freshman year.

DR. J. CHESTON MORRIS, of Philadelphia, read a paper on

THE MILK SUPPLY IN LARGE CITIES.

In London, he said, many families had been obliged to have the cow brought to the door of the house, and see the milk drawn before them in order to be sure that it was pure. In our own large cities no one who observed the settlements in the large milk cans could say there were no "grounds" of complaint. He believed that the proper way to prevent the dilution and adulteration of milk was to oblige milkmen to sell it in sealed jars marked with their names and addresses. By the use of small sealed jars also milk could be conveyed hundreds of miles in good condition, thus enlarging the territory from which the supply for a large city could be obtained. He pursued this method on his own farms near Philadelphia, the milk supply of which place, he thought, was probably better than that of any other large city in the United States. The first thing to do in the way of improvement everywhere was to convince the people that the cheapest milk was not the best. The farmers could not furnish good milk at a less average cost than from four to five

cents a quart, yet the dealers at present would pay only three cents in summer, and from four and a half to five cents in winter. By means of the sealed jars, he said, he had sent milk from Westchester County, Penn., to Aiken, S. C., which, after the three days' journey, proved fresh and sweet, and in the summer he sent milk daily to Atlantic City, a distance of ninety miles. The name and address on the jar placed the responsibility for bad milk where it belonged.

Papers were then read by DR. ROCKWELL on the Value of Electolysis, and DR. R. S. SUTTON, of Pittsburgh, on The Necessity of Cleanliness in Surgical Operations, and DR. KAISER read for Dr. Lewis P. Bush, of Wilmington, Del., a paper entitled, Some Thoughts on Vaccination, in which the writer expressed his belief in the necessity of compulsory vaccination, and claimed that no child who had not been vaccinated should be allowed to enter a public school.

DRS. DUNGLISON and MARCY presented a report on THE PROGRESS MADE BY THE STATES OF THE UNION IN MEDICAL LEGISLATION,¹

in which the registration laws of New York and Pennsylvania were described as only partially successful. The States whose Legislatures had passed more or less efficient laws in regard to the practice of medicine since the last annual meeting of the Academy were Delaware, Michigan, Minnesota, and Missouri.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year: President, Dr. Benjamin Lee, of Philadelphia; Vice-Presidents, Drs. A. L. Gihon, U. S. N., Nathan Allen, George F. Shradly, and E. J. Birmingham, of New York; Secretary and Treasurer, Dr. R. J. Dunglison, of Philadelphia; Assistant Secretary, Dr. Charles McIntyre, Jr., of Easton, Penn.

The President appointed as members of the Council, Drs. Charles C. Lee, of New York, William Elmer, of Trenton, N. J., and J. Cheston Morris, of Philadelphia. And it was announced that the next meeting of the Academy would be in Baltimore.

Recent Literature.

A Complete Hand-book of Treatment, Arranged as an Alphabetical Index of Diseases to Facilitate Reference, and Containing nearly One Thousand Formulae. By WILLIAM AITKEN, M. D. (Edin.), F. R. S. New York: Bermingham & Co. 1882.

This book, of about 450 pages, is composed of the chapters on Treatment, taken from the latest edition of Dr. Aitken's Science and Practice of Medicine, which have been somewhat revised and rearranged to make them more convenient for reference.

Training-schools for Nurses, with Notes on Twenty-two Schools. By W. G. THOMPSON, M. D. New York: G. P. Putnam's Sons. 1883.

A little book of the primer style, the first third, or eighteen pages, of which is occupied by an introductory account of nursing in general, and a general description of the organization of American training-schools. The rest of the book is composed of notes on twenty-two different schools in the United States, of several schools of midwifery, and of the Directory of Nurses in Boston and Philadelphia.

¹ Vide page 390 of this number of the JOURNAL.

Medical and Surgical Journal.

THURSDAY, OCTOBER 25, 1883.

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RAILWAY SPINE.

In this iconoclastic age when we are not allowed to believe in a personal Devil or good honest ghosts, or even to coddle our own pet superstitions and hobbies without a suspicion of mental degeneration, it is natural that the medical "bugaboo" raised by Mr. Erichsen some years ago, and christened spinal concussion, should meet with little quarter at the hands of the modern scientific observer. It is possible, however, that in this, as in other things, the skeptic may have gone too far, and that although it was no ghost that has alarmed us there may actually have been some phosphorescent light which we do not understand, and the nature of which we cannot fully explain. The cases reported recently in the JOURNAL by Dr. J. J. Putnam, and the paper in a late issue by Dr. Walton, point to the reality of a set of symptoms induced by traumatism which corresponds well with those hitherto termed spinal concussion, a name so misleading that many accurate observers through the influence of the name alone have been induced to deny the existence of what the name covers. A rose, however, under any other name will remain as fragrant to the sufferer, and whether the ailment be termed railway spine, or traumatic neurasthenia, or hysterical hemianæsthesia, the condition is equally distressing.

Mr. Erichsen's book undoubtedly led to an exaggeration of the dangers of a certain class of railway accidents, and gave a pretext for a great many unwarranted assaults on railway corporations. While, representing the reaction, Mr. Page's recent work certainly favors an undue belief in the certainty of recovery in cases of this sort. Erb presents the matter rather more fairly than either of these writers. Accidents which occur in railway collisions, as other accidents, may lead to a long train of nervous symptoms, and when death has resulted a post-mortem examination may reveal little apparent cause for the fatal result. In a few cases the evidence of a chronic meningitis of the cord was found. In the greater number of these cases the pathology is a riddle, which for its satisfactory solution will need a great deal of experiment and careful and extensive post-mortem investigation. Before accepting the actual identity between what is called hysteria and certain forms of spinal concussion, or, as suggested by Dr. Walton, regarding the railway spine as really a railway head, it is necessary to have

a clearer idea as to what hysteria actually is, and in general what part the brain plays as a central origin for some of the less marked nervous phenomena hitherto supposed to radiate from the cord.

The chief practical difficulty, however, encountered in these cases is not in determining whether the hyperæsthesia or the localized anæsthesia results from changes in the cord or in the brain, or whether the symptoms are to be regarded as organic or functional, but whether they are actual or feigned. But little is written in the ordinary medical text-books on malingerer in these cases for two reasons: first because the physician's bias is to regard a patient's manifestation of pain as genuine, or at least as "nervous" or exaggerated, and, second, because the directions for the detection of malingerer in these cases frequently would rather belong to a detective's manual than to a medical essay, involving as they would the questions of motive, previous personal character, and veracity. Usually the patient's symptoms are of such a nature, and so consistent or inconsistent with the ordinary types of disease, that the observer can arrive at the truth as to shamming by the process of reasonable conjecture; but given an intelligent and unscrupulous man with the prospect of a large award to be earned by his skill as a malingerer, and the opportunity for instruction afforded by the number of physicians usually called to examine such cases by the friends, the lawyers, and the family doctors, the result is frequently a puzzle which has not only to be guessed at and treated on the doctrine of chances, but explained before a non-medical audience unaccustomed to the shades of medical diagnosis, and inclined to regard doctors as a class of illogical men who disagree.

The needed clinical work, it seems to us, in the study of "railway spine" is the determination of clearly defined types of the disease, and the investigations of the variants from this type, and the certain relation of objective symptoms to the disease. The localizations of the central lesions and the pathological changes represented by certain symptoms furnishes interesting problems, but before we attempt to discover the North Pole let us develop Central Africa. All attempts, however, to get at a rational explanation of the peculiar features of this riddle of a disease must be regarded as of value, and the recent attention paid by neurologists to the subject is heartily welcome.

THE CONVERSION OF MALIGNANT TUMORS INTO INNOCENT GROWTHS, AND THE ADVANTAGES OF INCANDESCENT INSTRUMENTS.

PROFESSOR DR. V. NUSSBAUM recently delivered a notable clinical lecture in Munich,¹ in which he introduced one of the most important questions which can claim the attention of the medical profession, and he believes he has already taken an initial step toward its solution. To Thiersch belongs the credit of first directing the thoughts of surgeons in this direction by

¹ Wien. med. Zeit., June 3, 1883.

the memorable words, "We are justified in entertaining the hope for the discovery of a method of treatment for the positive cure of cancer if we can succeed in employing some means for a considerable time which shall act upon the tissue elements of the disease in such a way as to restrain their proliferation without causing their death (necrosis)." After attempts with many substances (injections of silver nitrate, pepsin, acetic acid, etc.) which proved entirely futile, Nussbaum now believes that he has discovered a procedure which answers the requirements of Thiersch, and which has already yielded very promising results in its practical application.

Professor Nussbaum adds, "It appears to me that a total interruption of all peripheral sources of nutrition is the means best adapted to restrain the proliferation of tissue elements without at the same time destroying their vitality. This object is best accomplished by the use of the thermo-cautery, with which instrument a deep channel is made quite around the malignant growth, thus cutting off entirely the supply of blood and other nutritive fluids from the surrounding tissues. The small vessels which ascend into the tumor from the parts beneath are sufficient to preserve its vitality so that gangrene does not occur. The thermo-cautery is far preferable to the ligature, and possesses many advantages over the knife. The hot iron and the various chemical caustics are worthy of more extensive employment in the domain of malignant growths than they have ever enjoyed."

Professor Nussbaum adds, "I do not doubt that thus circumscribing a cancerous growth, thus cutting off every channel of peripheral nutrition, has a brilliant future, especially in those desperate cases in which death is imminent from hæmorrhage." He gives the report of two cases in his own practice to emphasize this point. Also in cases in which the enfeebled condition of the patient forbids the thought of any operative measures for the removal of the growth this process finds an indication. At all events the cutting off of the peripheral blood supply has afforded, he reports, such unexpected and astonishing results that he earnestly recommends this procedure to the attention and practice of all those having occasion to treat a case adapted to its employment.

The entire lecture is worthy careful reading by every surgeon, though it is probable much difference of opinion would be entertained in regard to the views expressed. So eminent an authority and fellow countryman of Nussbaum's as Prof. V. Langenbeck declared himself opposed to them in the course of a discussion on cancer of the breast at the late Congress of German Surgeons at Berlin. V. Langenbeck thinks that a clean operation can be much better performed with the knife than with the thermo-cautery, cauterization causing greater suppuration, which again favors infection.

— We are glad to hear that Dr. Fisher, Superintendent of the Tewksbury Almshouse, has not been so ill as was currently reported, and is now convalescent.

MEDICAL NOTES.

— Owing to the space demanded in the second part of to-day's issue of the JOURNAL by the report of the proceedings at the dedication of the Harvard Medical School an editorial on the annual report of the Tewksbury Almshouse has had to be omitted.

— A contemporary quotes Dr. Da Costa as saying, "If one has not too much to do, he writes a short paper on phthisis; if one has little to do, he writes a long paper on phthisis; if one has nothing to do, he writes a book on phthisis." The same writer says: "Gynæcologists, as a rule, part their hair and their names in the middle, and never die until they have invented pessaries and speculums innumerable."

— The Scottish correspondent of the *Lancet* relates some instances of emotional disease rather novel, as he says, so far north. They consist of feigning death. The writer says: "One case occurred in Dunfermline, the other in Edinburgh; but probably the latter city will not in the future be considered a fitting field for the operations of these malingerers. The woman who had there feigned serious illness in the police cells, and formerly fainting fits, was actually conveyed to the infirmary, and then assumed a death-like state. A threat, however, to remove the body to the mortuary, aided by an energetic galvanic shock, was quickly effective, though similar treatment had again to be resorted to in the police cells. The interesting Dunfermline visitor, who was certainly not a Blue Ribbonite, caused some confusion in the prison during the night by indulging in certain fits to such an extent that the doctor was sent for. This gentleman — probably after a very hurried inspection — stated that death had occurred some hours before, and a post mortem was proposed. Some time afterwards a second examination was made, when signs of life were detected; but it was only after the suggestion of a post mortem and a threat of the galvanic battery that she rose to her feet, nothing amiss, walked round the cell, and afterwards enjoyed her breakfast. It should be said that the hour of visit to the Dunfermline case was four A. M.; but the mistake which occurred will be useful to police surgeons generally, whose patients are often so repulsive as to render a minute examination a most disagreeable duty. No suggestion of catalepsy has been made in either case, so that the parts must have been carefully rehearsed."

— M. Thuillier, who not long ago went to Egypt as a member of Pasteur's commission to investigate cholera, died from the disease shortly after his arrival in that country. Singularly enough his was the only death from cholera reported the day it took place. He was only twenty-seven years of age, and having been for some years Pasteur's assistant in his laboratory, had been intimately connected with some of his later investigations. He had charge of the parties sent to inoculate sheep against charbon in Hungary and in Prussia.

— According to the *British Medical Journal*, which quotes from the *Journal de Ploërmel*, a curious example of one of those outbreaks of epidemic nervous

disorder which were characteristic of the Middle Ages, but are now rarely heard of, has recently been seen. Of fifty pupils of the Girls' Congregational School of Saint Marlo des Trois Fontaines, upward of thirty-five have been attacked by a nervous disorder having all the symptoms of St. Vitus' dance. The school has been closed by order of the local authorities.

NEW YORK.

— The Saturday and Sunday Hospital Association held a meeting October 15th, preparatory to the annual hospital collection for 1883. A report made by the executive committee showed that the Association had recently greatly extended its field of activity, and that the collection to be taken in the different churches and synagogues this year would probably be much the largest in the history of the Association. The report stated that there are 347 Protestant churches and chapels and 30 synagogues in the city, and out of this whole number, 377, only 97 contributed to the fund last year. The largest proportion of those joining in the movement was in the Protestant Episcopal Church, in which 49 out of 81 churches and chapels contributed. It was determined to secure if possible a more general collection among the churches this year, and accordingly nearly every clergyman in the city has been called upon by a gentleman duly authorized to represent the Association. By this method of personal appeal all the denominations have been brought more heartily into the work, and the indications of the canvass now approaching are close to that there is a probability that the number of contributing churches, chapels, and synagogues will be nearly trebled, since up to the present time 275 out of the 377 have pledged themselves to make a collection. It is hoped that eventually fully 300 will contribute. It was stated that in addition to the churches that sent their contributions to the treasurer of the Association, twenty-three churches sent their collections directly to the treasurers of various hospitals last year.

— The new wing of St. Vincent's Hospital on Twelfth Street is now completed, and in order to assist in procuring the necessary furniture and appointments for it Mr. Lawrence Barrett gave a special performance of "Richelieu" on October 18th, by which the handsome sum of nearly \$5000 was raised.

— Much opposition is being expressed by the property-holders on the Hudson to placing the new aqueduct on the shores of that river. It is claimed by them that there would be great risk of tapping the wells between the aqueduct and the Hudson River, and that sickness would be caused by the removal of the débris from the tunnel; while along the other route proposed, the Saw-Mill River route, the country is much less thickly settled, and the property of much less value. It is argued, too, that the new aqueduct should be separated as far as possible from the old (which lies along the Hudson), so that neither would be affected by an accident to the other. The question has not yet been decided by the Aqueduct Commissioners.

— The Board of Health of the town of East

Chester, in consequence of representations made to it with regard to the prevailing sickness and mortality among the infants and young children at the branch of the New York Infant Asylum near Mount Vernon, West Chester County, recently held a special meeting and appointed a committee of investigation. The committee found two cases of diphtheria and one of measles (the patients in these cases being placed in tents), and in the morgue three dead children. It was decided to require the immediate removal of the children suffering from contagious diseases to comfortable quarters, but where they could still be quarantined. A coroner's jury in the case of one of the infants that died rendered a verdict in which the institution is thus severely arraigned: "It appears to us that within a period of two months past fully thirty per cent. of the children in the asylum have died. This fearful rate of mortality, in our opinion, is the result of gross negligence upon the part of those having charge of the medical and sanitary department of the institution, and a lack of attention on the part of the president of the society, acting under the authority of the board of management, in appointing and retaining a person incompetent of performing the duty required of a physician in charge of such an institution. . . . Further, we request the coroner to call the attention of the District Attorney of this county to this investigation, and request him to inquire whether the extraordinary rate of mortality above referred to is not a proper subject for criminal investigation by the grand jury." The incompetent person referred to is a female physician who not long since was appointed at the institution to supersede Dr. Brush, a gentleman of high scientific attainments, who has given special attention to the management of infants and young children. A few months ago the management of the New York Infant Asylum, under the direction of Mr. Clark Bell, won a very unenviable notoriety by arbitrarily dismissing almost its entire medical board without cause, and now Messrs. Theodore Roosevelt and T. K. Gibbs, members of the board of managers, have sent to the Commissioners of the State Board of Charities for the County of New York a series of charges against Mr. Bell.

— In the Monmouth County (N. J.) Court Judge Walling has given a ruling which is said to affect all the local boards of health of the State of New Jersey. An individual was on trial for assaulting Sanitary Inspector Coles, of Asbury Park, while the latter was making an inspection of his property. In his charge to the jury the judge said that the Board of Health had no right to appoint an inspector, and no authority to make an inspection of any man's premises, except in cases where a complaint had been made, and that after a proper complaint had been made a majority of the Board of Health must make the inspection. On account of this opinion the jury acquitted the prisoner, and the latter announced his intention to prosecute the members of the Board of Health and Inspector Coles for false arrest and imprisonment.

— Dr. H. S. Tanner, of fasting notoriety, was arrested on October 19th at Jamestown, New York, on a charge

of not being properly registered in the County Clerk's office. He has a diploma from the "Eclectic Medical Institute," dated February 2, 1859, and indorsed by the United States Medical College of New York, which is not a legal institution. Dr. Tanner is the third eclectic physician who has been arrested in Jamestown recently on information lodged with the authorities by the secretary of the Chautauqua County Board of Censors.

— A dinner was given at the Brunswick, October 14th, by the American Chemical Society to Professor Humant, Professor of Chemistry, and Professor Vogel, Professor of Light and Photography in the University of Berlin, and among those present were Professors Horsford of Providence, Silliman, Johnson, and Hunt, of Yale, Doremus and Chandler, of New York, Morton and Leeds, of the Stevens Institute, Hoboken, Eggleston, of Cornell, and Booth, President of the American Chemical Society.

Miscellany.

THE CELEBRATION OF THE ONE HUNDREDTH ANNIVERSARY OF THE HARVARD MEDICAL SCHOOL, AND THE DEDICATION OF ITS NEW BUILDING.

THIS interesting occasion was observed on the 17th inst., as was recorded by the JOURNAL last week, but the lateness of the date prevented our giving an extended notice of the event in that issue.

The programme opened at eleven A. M. in Huntington Hall of the Massachusetts Institute of Technology, before a large and distinguished audience. The platform was occupied by the President and other members of the Medical Faculty and a number of invited guests, among whom were noticed Sir William MacCormac, Sir Lyon Playfair, President Gilman of Johns Hopkins University, Gen. F. A. Walker of the Institute of Technology, Drs. Fordyce Barker and Sturgis of New York, Drs. Mullin, Howard, and Campbell of Canada, Dr. Hosmer, President of the Massachusetts Medical Society, Drs. Murray and Head, U. S. A., Rev. A. P. Peabody, Hon. Martin Brimmer, Mr. Henry P. Kidder, Col. Henry Lee, Hon. Francis E. Parker, Mayor Palmer of Boston, Ex-Mayor Samuel A. Green, and others. The two emeriti professors, Drs. Holmes and Bigelow, were seated near the desk, while behind them were displayed on a tasteful background of red drapery the counterfeit presentments of the two gentlemen, that of the former on canvas and of the latter in marble, to be presented to the School as permanent and vivid reminders of the two distinguished men who had conferred so much distinction upon it. The exercises were opened with an address by President Eliot, which was as follows:—

ADDRESS OF PRESIDENT ELIOT.

We are met to celebrate the beginning of the second century of the Medical School's existence and the simultaneous completion of its new building. It is a hundred years since John Warren, Benjamin Waterhouse, and Aaron Dexter were installed as professors of anatomy and surgery, theory and practice, and materia medica respectively, and without the aid of col-

lections or hospitals began to lecture in some small rough rooms in the basement of Harvard Hall and in a part of little Holden Chapel at Cambridge. From that modest beginning the School has gradually grown until it counts a staff of forty-seven teachers,—ten professors, six assistant professors, nine instructors, thirteen clinical instructors, and nine assistants,—working in the spacious and well-equipped building which we are shortly to inspect, and commanding every means of instruction and research which laboratories, dispensaries, and hospitals can supply. Out of our present strength and abundance we look back to the founding of the School and to its slow and painful development. We bear in our hearts the three generations of teachers who have served this school with disinterested diligence and zeal. We recall their unrequited labors, their frequent anxieties and conflicts, and their unfulfilled hopes; we bring to mind the careful plantings and the tardy harvests, reaped at last, but not by them that sowed. We meet, indeed, to rejoice in present prosperity and fair prospects, but we would first salute our predecessors and think with reverence and gratitude of their toils and sacrifices, the best fruits of which our generation has inherited.

The Medical Faculty of to-day have strong grounds for satisfaction in the present state of the School, for they have made great changes in its general plan and policy, run serious risks, received hearty support from the profession and the community, and now see their efforts crowned with substantial success. By doubling the required period of study in each year of the course, instituting an admission examination, strengthening the examinations at the end of each year, and establishing a voluntary fourth year of instruction, which clearly indicates that the real standard of the Faculty cannot be reached in three years, they have taken step after step to increase their own labors, make the attainment of the degree more difficult, and diminish the resort of students to the School. They have deliberately sacrificed numbers in their determination to improve the quality of the graduates of the School. At the same time they have successfully carried out an improvement in medical education which required large expenditures. This improvement is the partial substitution, by every student, of personal practice in laboratories for work upon books and attendance at lectures. The North Grove Street building, erected in 1846–47, contained only one small laboratory for students, that of anatomy. We shall shortly see that the new building contains a students' laboratory for each of the five fundamental subjects,—anatomy, physiology, chemistry, histology, and pathology,—and that a large part of the building is devoted to these working-rooms. It was a grave question whether the profession, the community, and the young men who year by year aspire to become physicians and surgeons, would support the Faculty in making these improvements. The answer can now be recorded. The School has received by gift and bequest \$320,000 in ten years; it has secured itself in the centre of the city for many years to come by the timely purchase of a large piece of land; it has paid about \$220,000 for a spacious, durable, and well-arranged building; it has increased its annual expenditure for salaries of teachers from \$20,000 in 1871–72 to \$36,000 in 1882–83; its receipts have exceeded its expenses in every year since 1871–72, and its invested funds now exceed those of 1871 by more than \$100,000. At the same time the School has become a cen-

tre of chemical, physiological, histological, and sanitary research, as well as a place for thorough instruction; its students bring to the School a better education than ever before, they work longer and harder while in the School, and leave it prepared, so far as sound training can prepare them, to enter, not the overcrowded lower ranks of the profession, but the higher, where there is always room. The Faculty recognize that the generosity of the community and the confidence of the students impose upon them reciprocal obligations. They gladly acknowledge themselves bound to teach with candor and enthusiasm, to observe and study with diligence that they may teach always better and better, to illustrate before their students the pure scientific spirit, and to hold all their attainments and discoveries at the service of mankind. Certainly the Medical Faculty have good reason to ask to-day for the felicitations of the profession and the public.

Nevertheless, the governors, teachers, graduates, and friends of this School have no thought of resting contented with its present condition. Instructed by its past they have faith in its future. They hope, they know, that the best fruits of their labors will be reaped by later generations. The medical profession is fortunate among the learned professions in that a fresh and boundless field of unimaginable fertility spreads out before it. Its conquests to come are infinitely greater than those already achieved. The great powers of chemistry and physics, themselves all new, have only just now been effectively employed in the service of medicine and surgery. The zoölogist, entomologist, veterinarian, and sanitarian have just begun to contribute effectively to the progress of medicine. The great achievements of this century in medical science and the healing art are all prophetic. Thus, the measurable deliverance of mankind from small-pox is an earnest of deliverance from measles, scarlatina, and typhoid fever. Within forty years anæsthetics and antiseptics have quadrupled the chances of success in grave surgical operations, and have extended indefinitely the domain of warrantable surgery; but in value far beyond all the actual benefits which have thus far accrued to mankind from these discoveries is the clear prophecy they utter of greater blessing to come. A medical school must needs be always expecting new wonders.

How is medical science to be advanced? First, by the devoted labors of men, young and old, who give their lives to medical observation, research, and teaching; secondly, by the gradual aggregation in safe hands of permanent endowments for the promotion of medical science and of the sciences upon which medicine rests. Neither of these springs of progress is to fail us here. Modern society produces the devoted student of science as naturally and inevitably as mediæval society produced the monk. Enthusiastic devotion to unworldly ends has not diminished; it only manifests itself in new directions. So, too, benevolence and public spirit, when diverted by the teachings of both natural and political science from many of the ancient forms of benevolent activity, have simply found new and better modes of action.

With thankfulness for the past, with reasonable satisfaction in the present, and with joyful hope in the future, the Medical Faculty celebrate this anniversary festival, welcoming their guests, thanking their benefactors, and exchanging with their colleagues, their students, and the governing boards mutual congratula-

tions and good wishes as the school sets bravely out upon its second century.

At the conclusion of his address President Eliot introduced the orator of the day in the following words: "And now, ladies and gentlemen, I have the pleasure of presenting to you our oldest professor and our youngest; our man of science and our man of letters, our teacher and our friend, Dr. Holmes."

Dr. Holmes's address, which we published in full last week, was attentively listened to, and its many happy expressions appreciatively received by an audience which was in full *rapport* with the speaker. The vigorous defense of the conduct of the anatomical department against the charges which had been made against it in particular was warmly applauded.

PRESENTATION OF A PORTRAIT OF PROFESSOR HOLMES.

At the conclusion of the oration Dr. Francis Minot presented to the School the portrait of Dr. Holmes in these words:—

MR. PRESIDENT,—Many of the alumni of the School, together with some of its present students, have desired that a permanent memorial of their beloved teacher, Prof. Oliver Wendell Holmes, should be placed in the new college building in token of their gratitude for the great services which he has rendered to many generations of his pupils. By his eminent scientific attainments, his sound methods of teaching, his felicity of illustration, and his untiring devotion to all the duties of his chair he inspired those who were so fortunate as to come under his teaching with the importance of a thorough knowledge of anatomy, the foundation of medical science. In the name of the alumni and students of this college I have the pleasure of presenting to the Medical Faculty a portrait of Professor Holmes, painted by Mr. Alexander, to be placed in the college in remembrance of his invaluable services to Harvard University, to the medical profession, and to the community.

PRESENTATION OF A BUST OF PROFESSOR BIGELOW.

Immediately after Dr. Minot had finished his remarks, Dr. Samuel A. Green, in behalf of the donors, presented a bust of Dr. Henry J. Bigelow as follows:—

The pleasant duty has been assigned me, Mr. President, to present to you, as the head of the corporation of Harvard College, in behalf of his many friends, this animated bust of Prof. Henry J. Bigelow. The list of subscribers comprises about fifty names, and includes nearly all the surgeons of the two great hospitals in this city, several gentlemen not belonging to the medical profession, but warm personal friends of Dr. Bigelow, a few ladies who had been his patients, and all the surgical house-pupils who had ever been connected with the Massachusetts General Hospital during his long term of service at that institution, so far as they could easily be reached by personal application. The bust is given on the condition that it shall be placed permanently in the new surgical lecture room, which corresponds to the scene of Dr. Bigelow's long labors in the old building. It has been made by the eminent sculptor, Launt Thompson, of New York, and is a most faithful representation of the distinguished surgeon. It outlines with such accuracy and precision the features of his face and the pose of his head that nothing is wanted, in the opinion of his friends, to make it a correct likeness.

I need not, in the presence of this audience, name the various steps by which Dr. Bigelow has reached the high position which is conceded to him as freely and fully in Europe as it is in America, but I cannot forbear an allusion to some of his original researches. His mechanism of the reduction of a dislocated femur by manipulation was a great discovery in surgical science, and follows as a simple corollary to the anatomical facts which he has so clearly and minutely demonstrated. His operation of rapid lithotripsy has deprived a painful disease of much of its terror as well as of its danger. Nor should I overlook on this occasion his quick and ready discernment of the importance of Dr. Morton's demonstration of the use of ether as a safe anæsthetic, which took place at the Massachusetts General Hospital in the autumn of 1846. The discovery of this greatest boon to the human family, since the invention of printing, was fraught with such immense possibilities that the world was slow to realize its magnitude; but by the clear foresight and prudent zeal of Dr. Bigelow, shown in many ways, the day was hastened when its use became well-nigh universal.

Dr. Bigelow has filled the chair of surgery in the Harvard Medical School during thirty-three years, a period of professional instruction that rarely falls to the lot of any teacher; and he now leaves it with the honored title of Professor Emeritus. During this long term of service he has taught, through his lectures, probably not fewer than 1800 students, who have graduated at the School, and perhaps 7500 more who have taken their degrees elsewhere; and by these thousands of physicians now scattered throughout the land, those of them who survive, Dr. Bigelow is remembered as most eminently a practical teacher. Active in his profession, clear in his instruction, and enthusiastic in his investigations, he always had the happy faculty of imparting to his students a kindred spirit and zeal. *Haud inexpertus loquor.*

President Eliot then briefly accepted the portrait and the bust in behalf of the Medical School, as memorials of two great teachers, saying that it was such instructors, after all, and not great buildings, that were the glory and pride of an institution of learning.

AT THE NEW BUILDING.

This closed the exercises at Huntington Hall, and an adjournment was then made to the new building at the corner of Boylston and Exeter Streets, where the formal services of dedication took place. This building has already been described at length in this journal, and it only remains to say that the day of dedication found everything in perfect order, and that an abundant corps of ushers were in attendance to show visitors every part of the edifice. As soon as the company was assembled in the main hall and the galleries surrounding it, it was called to order by President Eliot, when a prayer of dedication was offered by Rev. A. P. Peabody, D. D. This and the following exercises occurred on the grand staircase, where they could be well heard and witnessed throughout the building.

President Eliot then said: "In behalf of the President and Fellows of Harvard University and of the Medical Faculty, I now declare this building to be devoted to medical science and the advancement of the art of healing."

Dr. H. W. Williams then spoke in behalf of the Medical Faculty as follows:—

FRIENDS OF THE HARVARD MEDICAL SCHOOL,—For a hundred years the Medical Faculty of Harvard College have earnestly sought to discover, and striven faithfully to teach, whatever might exalt the condition, relieve the woes, and prolong the service of those minds and bodies through which man lives, and moves, and is. Year by year they have seen their horizon of knowledge extended and their sphere of duty enlarged. But, though zeal and self-sacrifice have not been wanting, their efforts to be useful have been continually hindered because of imperfect facilities and scanty resources.

All is changed! In this more wonderful than Aladdin's palace, risen from the sea,¹ and which has already endured the wrath and mercy of the flames, we see a fulfilment of our hopes, and the means and assurance of success. Thanks to generous benefactors, there will no longer be a lack of room or of appliances for our needs; our work will go on under fairer auspices, and we can offer to disciples of the healing art fitter opportunities and ampler aid in their studies.

As spokesman of the Faculty, on this occasion so full of felicitation and of promise, I would I could give to their message a host of tongues, to adequately thank those whose great flood of bounty has thus favored and endowed us. In occupying this beautiful and convenient structure we shall ever feel that the place is dignified by the givers' deed. And we rejoice the more because we know that this gift of three hundred thousand dollars has been bestowed by those who are accustomed to use their own eyes in the estimation of desert; and that it signifies a hearty approval of our endeavors, and an intent that medical science, as it is to be here embodied and taught, shall have a warm and generous support.

In accepting this more than princely gift, as a token that the value and necessity of well-educated physicians, to every community, is felt and acknowledged, we hail the privilege of goodly fellowship, in which the donors and ourselves have become co-workers, to the end that blessings to the whole land may arise and be memorized in this institution; and we trust that the efforts of the Faculty to advance the knowledge, train the judgment, and perfect the skill of those entering our profession, will ever continue to deserve countenance and help.

Col. Henry Lee, in behalf of the subscribers to the building fund, then spoke as follows:—

MR. PRESIDENT,—Thanks for your invitation to be present on this interesting occasion,—the hundredth anniversary of your Medical School, and the dedication of a new building, of fair proportions, well adapted to your wants, as far as a non-professional can judge.

You have assigned to me the honorable task of speaking for the contributors to the building fund.

I little thought, as I used to gaze with awe at that prim, solitary, impenetrable little building in Mason Street, and with the aid of imaginative companions, conjured up the mysteries within, that I should ever dare to enter and explore its interior; nor have I yet acquired that relish for morbid specimens which characterized my lamented kinsman, who devoted so many years to accumulating and illustrating your pathological collection.

It is an ordeal to a layman, Mr. President, especially to one who has reached the sixth age, to be so forcibly reminded, as one is here, of the

¹ The site occupied by the Medical College was once covered by the tides.

"last scene of all
That ends this strange, eventful history,
Sans teeth, sans eyes, sans taste, sans everything,"

and it is a further ordeal to assume to speak for others, whose motives for aiding you I may not adequately set forth.

This I can say, that we are citizens of no mean city; that private frugality and public liberality have distinguished the inhabitants of this "Old Town of Boston," from the days of the good and wise John Winthrop, whose own substance was consumed in founding this colony, to the present time.

Down through these two centuries and a half the multiform and ever-increasing needs of the community have been discovered and supplied, not by government, but by patriotic citizens, who have given of their time and substance to promote the common weal, remembering "that the body is not one member, but many, and that the members should have the same care one for another."

It is this public spirit, manifested in its heroic form in our Civil War, that has made this dear old Commonwealth what we all know it to be, despite foul slanders. Far distant be the day when this sense of brotherhood shall be lost.

Purple and fine linen are well, if one can afford them; but let not Dives forget Lazarus at his gate.

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay."

Whatever doubts may arise as to some of our benevolent schemes, our safety and progress rest upon the advancement of sound learning, and we feel assured that the increased facilities furnished by this ample building for acquiring and disseminating knowledge of our fearful and wonderful frame, will be improved by your brethren.

Some of the papers read before the International Medical Congress in London, two years ago, impressed me deeply with the many wants of the profession.

And who are more likely to have their wants supplied? for the physician is not regarded here, as in some countries, as the successor to the barber surgeon, and his fees slipped into his upturned palm as if he were a mendicant or a menial.

Dining with two Englishmen, one an Oxford professor, the other the brother of a lord, a few years since, I was surprised to hear their views of the social standing of the medical profession, and could not help contrasting their position here, where, if not all autocrats, they are all constitutional, and some of them hereditary, monarchs, accompanied by honor, love, obedience, troops of friends.

But, however ranked, physicians have the same attributes the world over. I have had occasion to see a good deal of English, French, German, and Italian physicians under very trying circumstances, and have been touched by their affectionate devotion to their patients.

The good physician is our earliest and our latest friend; he listens for our first and our last breath; in all times of bodily distress and danger we look up to him to relieve us.

Neither "the pestilence that walketh in darkness; nor the sickness that destroyeth in the noonday," deters him.

"Alike to him is time, or tide,
December's snow, or July's pride;
Alike to him is tide, or time,
Moonless midnight, or matin prime."

The faithful pursuit of any profession involves sacrifice of self; but the man who calls no hour his own, who consecrates his days and nights to suffering humanity, treads close in the footsteps of his Master.

No wonder, then, that the bond between them and their patients is so strong; no wonder that we respond cheerfully to their call, in gratitude for what they have, and in sorrow for what they have not, been able to do, to preserve the lives and to promote the health of those dear to us. And how could money be spent more economically than to promote the further enlightenment of the medical profession? What better legacy can we leave our children, and our children's children, than an illumined Medical Faculty?

Following the remarks of Colonel Lee, Dr. H. P. Bowditch, the dean of the Faculty, briefly expressed their acceptance of the trust and responsibilities imposed upon them, and closed with an invitation to inspect the building and to partake of refreshments which were served in the medical lecture rooms.

The distinguished strangers from other cities were entertained at dinner in the evening by various members of the profession in Boston, and subsequently a reception was held at Young's Hotel by the Faculty of the Harvard Medical School, which was very numerous attended, and was an extremely enjoyable occasion. The company separated about half-past eleven o'clock, after the discussion of an elaborate and excellent supper.

Among the guests from other cities who were present during the day may be mentioned Presidents Gilman, of the Johns Hopkins University; Laws, University of Missouri; Robinson, Brown University; Colonels Murray and Head, surgeons United States Army; Sir William MacCormac and Sir Lyon Playfair, of London; Professors Osler, Campbell, Howard, T. Sterry Hunt, Montreal; Drs. Barker, Agnew, Sims, Dalton, W. H. Draper, Satterthwaite, Shrady, C. C. Lee, of New York; Drs. H. C. Wood, Tyson, Hays, Woodbury, Mears, of Philadelphia; Dr. Twitchell, of Keene, N. H.; Drs. Gerrish, Wood, and Dana, of Portland, Me.; Drs. Caswell, Parsons, Miller, and Ely, of Providence, R. I.

MATERIAL WANTED FOR EMBRYOLOGICAL RESEARCH.

THOSE of our readers who obtain embryos in the course of their practice, which they do not require for their own use, will confer a special and valuable favor upon Dr. Charles S. Minot by sending them to him at the Harvard Medical School, on Boylston Street. Dr. Minot has undertaken an extended investigation for the purpose of completing a general work on human embryology, and he is therefore very desirous of obtaining the largest material possible of all the stages of development, the latest as well as the earliest. He will gladly bear any expenses incurred in sending the desired specimens, all of which will be immediately and gratefully acknowledged. It is very advantageous to have the foetus in as fresh a condition as possible, otherwise it may be best preserved in ordinary alcohol weakened with one sixth water; but an embryo should not remain in this fluid more than four days, when it should, to assure preservation, be transferred to ordinary strong alcohol. It is only by the generous assistance of practicing physicians that such studies as those above alluded to can be carried out successfully.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 13, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	546	183	21.78	16.84	7.32	4.21	4.03
Philadelphia.....	846,984	322	90	17.05	14.88	1.55	3.41	6.20
Brooklyn.....	566,689	—	—	—	—	—	—	—
Chicago.....	503,304	194	91	24.99	4.08	5.10	6.63	8.67
Boston.....	362,535	172	62	24.94	19.72	9.86	2.32	7.54
St. Louis.....	350,522	157	74	23.04	6.40	9.60	1.28	5.12
Baltimore.....	332,190	138	51	29.52	16.56	5.76	2.88	15.12
Cincinnati.....	255,708	80	22	10.00	12.50	3.75	—	2.50
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	70	27	12.87	14.28	2.86	2.86	1.43
Pittsburg..... (1883)	175,000	52	25	30.72	13.44	1.92	5.76	17.28
Buffalo.....	155,137	68	29	23.52	11.76	—	—	1.47
Milwaukee.....	115,578	35	15	20.02	11.44	2.86	8.58	8.58
Providence..... (1883)	116,755	40	12	15.00	25.00	2.50	5.00	—
New Haven..... (1883)	73,000	12	5	25.00	8.33	8.33	—	16.66
Charleston.....	49,999	39	15	17.92	10.24	—	7.68	2.56
Nashville.....	43,461	17	6	5.88	17.64	—	—	—
Lowell.....	59,485	26	4	26.95	14.40	7.20	7.20	—
Worcester.....	58,295	20	8	25.00	5.00	—	15.00	10.00
Cambridge.....	52,740	15	5	20.00	20.00	6.66	6.66	6.66
Fall River.....	49,006	24	10	45.76	4.16	29.12	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	12	3	—	25.00	—	—	—
Springfield.....	33,340	8	5	12.50	—	—	—	—
Salem.....	27,598	6	1	16.66	—	—	16.66	—
New Bedford.....	26,875	8	2	—	—	—	—	—
Somerville.....	24,985	9	1	44.44	22.22	33.33	—	—
Holyoke.....	21,851	6	6	50.00	—	33.33	—	16.66
Chelsea.....	21,785	5	3	20.00	—	—	—	20.00
Taunton.....	21,213	7	2	—	28.56	—	—	—
Gloucester.....	19,329	9	4	11.11	11.11	—	11.11	—
Haverhill.....	18,475	9	0	11.11	11.11	11.11	—	—
Newton.....	16,995	6	0	—	33.33	—	—	—
Brockton.....	13,608	3	1	33.33	—	—	33.33	—
Newburyport.....	13,537	5	0	20.00	—	—	—	20.00
Fitchburg.....	12,405	4	2	—	—	—	—	—
Malden.....	12,017	6	4	16.66	16.66	—	—	16.66
Eighteen Massachusetts towns.....	147,359	44	17	15.89	11.35	15.89	—	—

Deaths reported 2174 (no reports from Brooklyn and New Orleans): under five years of age, 796: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 444, consumption 299, lung diseases 190, diarrhoeal diseases 138, diphtheria and croup 112, typhoid fever 77, scarlet fever 34, malarial fevers 33, whooping-cough 14, cerebro-spinal meningitis 11, erysipelas nine, puerperal fever eight, measles seven, small-pox one. From scarlet fever, Philadelphia 10, Boston seven, Buffalo four, Chicago and Cincinnati three each, New York and Lowell two each, St. Louis, Baltimore, and Pittsburg one each. From malarial fevers, New York 10, St. Louis eight, Philadelphia six, Baltimore four, Charleston three, Chicago and Providence one each. From whooping-cough, New York four, District of Columbia three, Chicago, Baltimore, and Pittsburg two each, Springfield one. From cerebro-spinal meningitis, New York six, Philadelphia, Boston, Providence, Nashville, Fall River one each. From erysipelas, New York six, Philadelphia, Chicago, and St. Louis one each. From puerperal fever, Chicago two, New York, Boston, St. Louis, Providence, Lowell, and Somerville one each. From measles, New York five, Baltimore and District of Columbia one each. From small-pox, Philadelphia one.

In the 37 cities and towns of Massachusetts, with an estimated population of 1,130,974 (estimated population of the State 1,922,530), the total death-rate for the week was 18.53 against 20.08 and 17.62 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending September 29th, the death-rate was 19.1. Deaths reported 3154: diarrhoea

279, acute diseases of the respiratory organs (London) 163, scarlet fever 102, fever 55, measles 49, whooping-cough 44, diphtheria 26, small-pox (Birmingham four, London and Sunderland two each) eight. The death-rates ranged from 14.1 in Leicester to 33.2 in Newcastle-on-Tyne; Bristol 15.4; Bradford 15.8; London 16.6; Wolverhampton 18.2; Leeds 19; Birmingham 20.1; Sheffield 21.9; Manchester 25.1; Liverpool 26.1; Preston 28.6. In Edinburgh 18.8; Glasgow 22.3; Dublin 23.7.

For the week ending September 22d, in 168 German cities and towns, with an estimated population of 8,688,139, the death-rate was 23.5. Deaths reported 3920; under five years of age, 2061; consumption 455, diarrhoeal diseases 281, lung diseases 255, diphtheria and croup 213, scarlet fever 87, typhoid fever 73, whooping-cough 66, measles and röteln 36, puerperal fever 20, small-pox (Gross-Glogau one) one. The death-rates ranged from 11.1 in Darmstadt to 33.8 in Magdeburg; Königsberg 33.5; Breslau 30.7; Munich 26.9; Dresden 21.8; Berlin 27; Leipzig 20.8; Hamburg 23.6; Cologne 23.8; Frankfurt a. M. 12; Strasburg 18.2.

For the week ending September 29th, in the Swiss towns, there were 34 deaths from diarrhoeal diseases, consumption 19, lung diseases three, diphtheria and croup three, scarlet fever one, whooping-cough one, erysipelas one, typhoid fever one. The death-rates were, at Geneva 14.3, Zurich 10, Basle 16.7; Berne 20.3.

The meteorological record for the week ending October 13th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
Oct., 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 7	30.309	45	57	30	73	80	100	84	NW	E	E	7	9	1	C	C	C	—	—
Mon., 8	30.361	46	55	36	100	93	96	96	0	SE	0	0	8	0	G	C	C	—	—
Tues., 9	30.315	48	58	38	100	83	93	92	0	SE	W	0	8	4	G	C	C	—	—
Wed., 10	30.166	55	62	44	80	89	100	89	W	E	S	1	7	7	C	C	C	—	—
Thurs., 11	30.165	60	80	53	90	60	93	81	SW	E	NE	3	11	8	C	F	O	—	—
Fri., 12	30.235	52	58	48	100	100	100	100	NE	NE	NW	13	5	3	R	O	G	—	—
Sat., 13	30.073	66	79	52	100	75	100	92	S	SW	S	1	6	6	T	F	G	—	—
Means, the week.	30.232	53	80	30				91										18.35	.17

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 12, 1883, TO OCTOBER 19, 1883.

HARTSUFF, ALBERT, major and surgeon. Granted leave of absence for fifteen days. Paragraph 2, S. O. 205, Department of the Missouri, October 6, 1883.

HUNTINGTON, DAVID L., major and surgeon. By direction of the President will, until further orders, take charge of the office of the Surgeon-General of the Army and perform the duties pertaining thereto. Paragraph 3, S. O. 234, A. G. O., October 11, 1883.

MEACHAM, FRANK, major and surgeon. Assigned to duty at Fort Douglas, Utah. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

STERNBERG, GEORGE M., major and surgeon. Granted leave of absence for one month, to date from October 6, 1883, with permission to go beyond the limits of the Department, and to apply for extension of one month. Paragraph 3, S. O. 134, Department of California, October 4, 1883.

TAYLOR, MORSE K., major and surgeon. Assigned to duty at Fort Sill, I. T. Paragraph 4, S. O. 210, Department of the Missouri, October 13, 1883.

CRONKHITE, H. M., captain and assistant surgeon. Assigned to duty at Fort D. A. Russell, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

HEIZMANN, CHARLES L., captain and assistant surgeon. Granted leave of absence for six months, with permission to go beyond sea. Paragraph 3, S. O. 235, A. G. O., October 15, 1883.

WEISSEL, DANIEL, captain and assistant surgeon. Assigned to duty at Fort Fred Steele, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

ARTHUR, W. H., first lieutenant and assistant surgeon. Assigned to duty at Fort Douglas, Utah. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

STRONG, NORTON, first lieutenant and assistant surgeon. Assigned to duty at Fort Washakie, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.]

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING OCTOBER 20, 1883.

HORD, W. T., medical director, and **CLEBORNE, C. J.**, medical inspector, ordered to the U. S. S. Hartford at Panama, on duty connected with a court martial.

GORGAS, A. C., medical inspector, detached from Naval Hospital, Chelsea, Mass., November 10th, and ordered to the Naval Hospital, Mare Island, Cal.

BROWNE, J. M., medical director, ordered as a member of the National Board of Health.

HEFFINGER, A. C., passed assistant surgeon, ordered to temporary duty at Navy Yard, Portsmouth, N. H.

WHITING, ROBERT, passed assistant surgeon, granted leave of absence for three months.

The orders in last week's report of Surgeon W. J. SIMON and Passed Assistant Surgeon M. H. CRAWFORD should read to U. S. S. Shenandoah instead of Trenton.

OBITUARY.

ROBERT W. OLIPHANT, M. D., son of the late Rev. David Oliphant, of Beverly, Mass., died in St. Louis, Mo., on the 9th inst., aged fifty-eight years. He graduated at Amherst, took his medical degree at Harvard, and, in 1848, settled in St. Louis. He devoted himself closely to his profession, and acquired a large and lucrative practice. One of the oldest members of the Massachusetts colony in that city, he had many friends to whom he ever extended a cordial hospitality. He leaves a widow and one daughter.

SUFFOLK DISTRICT MEDICAL SOCIETY.—There will be a stated meeting of the Society on Saturday, October 27th, at 19 Boylston Place, at 7.45 P. M. Paper by Dr. Charles Harrington: Sub-Soil Water as a Factor in the Causation of Outbreaks of Typhoid Fever. The discussion will be opened by Drs. Walcott, Durgin, and Prince. Choice of Nominating Committee. Supper after the meeting. H. C. HAVEN, Secretary.

BOOKS AND PAMPHLETS RECEIVED.—On Malpositions of the Kidney. Thesis for the Degree of M. D. By David Newman, M. B. C. M. D. (Reprint from Glasgow Medical Journal.) Recherches Cliniques et Thérapeutiques sur l'Epilepsie, l'Hystérie, et l'Idiotie. Compte Rendu du Service des Epileptiques et des Enfants Idiots et Arriérés de Bicêtre Pendant l'Année 1881. Par Bourneville, Bonnaire, et Wuillamé. Publications du Progrès Médical. Paris. 1882.

Guiteau. A Case of Alleged Moral Insanity. A Rejoinder by J. J. Elwell to Reply of E. C. Spitzka, M. D., New York. Second Paper. (Reprint.) 1883.

Sea-Sickness; its Cause, Nature, and Prevention, without Medicine or Change in Diet. A Scientific and Practical Solution of the Problem. By William H. Hudson. Boston: S. E. Cassino & Co. 1883.

Medical Education and the Regulation of the Practice of Medicine in the United States and Canada. Illinois State Board of Health. 1883.

The Endoscope in Disease of the Male Urethra. By A. Ravogli, M. D., Cincinnati, Ohio. (Reprint from Cincinnati Lancet and Clinic.)

The Mental Status of Guiteau. A Review. By James H. McBride, Superintendent of Hospital for Insane at Milwaukee, Wis. (Reprint.) 1883.

The Collective Investigation of Diphtheria as conducted by the Therapeutic Gazette, Detroit, Mich. With Editorial Summary. By J. J. Mulheron, M. D. Detroit, Mich.: George S. Davis. 1883.

Women as a Physician. Illustrious Examples drawn from History, etc. By Eugene F. Cordell, M. D. Abstract of an Introductory Lecture before the Woman's Medical College of Baltimore, October 1, 1883. (Reprint.)

Clinical Report on Cases of Lacerated Cervix and Ovariectomy from Private Practice. By Joseph H. Warren, A. M., M. D. Boston, Mass. (Reprint.) 1883.

Lectures.

CLINICAL LECTURE.¹

DELIVERED AT BELLEVUE HOSPITAL, NEW YORK,
MAY 25, 1883.

BY PROF. AUSTIN FLINT, M. D.

I. HEART COMPLICATION IN ACUTE ARTICULAR RHEUMATISM.

GENTLEMEN, — The young man whom I bring before you first to-day is now convalescing from an attack of acute articular rheumatism, which began three weeks ago. He entered the hospital only a few days since, however, and up to that time he had received no medical treatment. At the time that he was admitted different joints of the body were affected, and there was still a certain amount of fever present; but under the treatment adopted here the symptoms soon disappeared. This consisted of twenty grains each of the bicarbonate of sodium and salicylate of sodium every two hours. The system was thus promptly brought under the influence of these remedies, and it seems to have tolerated this large amount very well.

The special point to which I wish to direct your attention in connection with this case is that an examination of the heart reveals the presence of a mitral systolic murmur. The question at once arises, Is this murmur the result of lesions caused by the attack of acute rheumatism from which the patient is just recovering? You must recollect, in the first place, that endocarditis not infrequently entirely escapes notice. In this instance the patient informs me that he has had no pain in the cardiac region; but even if he had had pain there, it might very likely have been due to other causes, such as neuralgia or muscular trouble. While endocarditis in many instances does not give rise to any pain, it is also true of it, as well, that it may not occasion any disturbances of the heart's action, or much increase in the fever due to the attack of acute rheumatism in connection with which it occurs. In a great many cases we can only tell that endocarditis has supervened by the fact that an organic murmur is discovered which did not previously exist. If there has been any increase in fever noted, this would, of course, be corroborative evidence of the existence of endocarditis. As I have examined the present patient for the first time to-day, I cannot say whether the murmur of which I have spoken is due to a recent endocarditis or to one occurring in connection with some previous attack of acute rheumatism. On questioning him I find that he has had previous attacks of the latter; the first one having occurred ten years ago, and the last one, four years ago. There is one point, however, which may throw light on the matter. If there is enlargement of the heart, there can be no doubt that the mitral murmur results from an old lesion; while if there is no enlargement, the inference is that the endocarditis has occurred during the recent attack of rheumatism, although this does not necessarily follow. Before proceeding to find out the area of cardiac dullness here, I may premise that the patient tells me that he has sometimes suffered from shortness of breath on exercise, which would seem to indicate the existence of more or less cardiac trouble prior to this illness. Now making the examination, I find

that the apex beat is in its normal position, and careful percussion fails to elicit any increase in the normal limits of cardiac dullness. It cannot be positively determined, therefore, whether the endocarditis occurred in connection with the recent, or some previous, attack of rheumatism. We can only say that if it did take place during some other attack, lesions have not as yet resulted which commonly give rise to cardiac enlargement.

It may perhaps be asked whether this may not be merely a functional murmur, after all. I think it is not, because it has been doubted whether a persistent mitral murmur is ever of this character; and even if such a thing were possible, it must be of such rare occurrence as to make it scarcely worth while to take the supposition into consideration. The murmur found here, it seems to me, is probably due to a little roughness of the valves resulting from endocarditis; and the lesion, whatever its nature, is at all events giving rise to no difficulty whatever at the present time. There is also, I find, a murmur at the base of the heart in this case; but this I judge to be inorganic, as it is of the character which we frequently meet with in anæmic subjects, and especially among women.

Our second patient to-day is a woman, who is still confined to her bed. She had one attack of acute articular rheumatism a year ago, and the present one commenced two weeks since, although she was not admitted into the hospital until the day before yesterday. Different joints have been affected, and she has had a certain amount of fever; but I do not know what kind of treatment she has been getting. When I first saw her, which was the day of her admission, I listened to her heart to see if I could discover the presence of a mitral murmur, and failed to detect any. I did not make any examination of the patient yesterday; but to-day I find that there is a mitral murmur. It is a direct systolic murmur, and there is no regurgitation. Unless I overlooked its presence when I examined the patient the day before yesterday, it is, therefore, a murmur which has just been developed from the effects of endocarditis. The woman says, on being questioned, that she has some præcordial pain, but it is quite evident that she lays very little stress upon it. It is a fact worthy of notice in connection with this endocarditis, that the joint symptoms have almost entirely disappeared since it commenced. On admission this patient was put upon the same treatment as the first one; but the stomach soon rebelled, and troublesome vomiting ensued. She has practically, therefore, had no treatment since she came in. The one great object of medication in acute rheumatism is to prevent cardiac complications. Although pericarditis may be accompanied by more or less danger, endocarditis is of itself of no consequence whatever. In a certain proportion of cases, however, organic lesions will sooner or later result from it; and so when I bring cases of valvular disease of the heart before you and ask whether the patients have ever had acute articular rheumatism, in nine cases out of ten the answer is an affirmative one. The question then arises, What are we to do to avoid this complication? This cannot be accomplished by cutting short the attack of rheumatism by such remedies as the salicylate of sodium; although this is certainly a very desirable thing to do. The only means at our disposal, which, so far as I know, offers any chance of warding off cardiac complications, is to render the blood alkaline as rapidly as possible,

¹ Reported for the Boston Medical and Surgical Journal.

and then keep it constantly in this condition. Reliable statistics establish the fact that this unquestionably has the effect of preventing endocarditis in a considerable proportion of cases. From half a drachm to a drachm of bicarbonate of sodium should be given every two or three hours until the urine is distinctly alkaline; after which the quantity may be greatly reduced, as a comparatively small amount is then sufficient to maintain the alkalinity. At present the patient before you is getting along very fairly, but I think that in her case it would be highly desirable to return to the alkaline treatment just as soon as it is practicable.

II. A CASE OF FATTY LIVER IN CONNECTION WITH ASCITES FROM HEPATIC CIRRHOSIS; REMARKS ON TAPPING IN THE LATTER CONDITION.

The woman who is now before you I selected the day before yesterday as a suitable case upon which to make some remarks before you in regard to the practical treatment of ascites from cirrhosis of the liver. Since then she has had a violent attack of delirium tremens, which of itself is an excellent commentary on the usual causation of this affection; but which, as you see, has left her in a condition which renders any satisfactory examination of the abdomen out of the question at present. It has been my experience that women with delirium tremens are less manageable than men suffering from it; and this patient has proved no exception to the rule, as I learn that she has made frequent attempts to assault her attendants.

The history of the case is as follows: Catherine S., fifty years of age, and a native of England. She was admitted to the hospital twelve days ago, when she stated that she had been a moderate drinker for a number of years, and that during the last six months she had been drinking hard. She would always take whiskey before breakfast, and after a time she began to suffer from vomiting of mucus in the morning, with anorexia. I may here remark that gastritis such as is thus described is rare except in connection with conditions of alcoholism, like that which is present in this case. During the last year she has vomited blood at times, and there can be little doubt that this hæmorrhage is due to cirrhosis of the liver, of which, as you know, it is one of the symptoms. She has also suffered from pain and swelling in the abdomen, and for three weeks before admission (during which time she was drinking harder than ever) she had a constant diarrhoea. Here, then, is a group of symptoms altogether characteristic of cirrhosis of the liver: ascites, hæmorrhage, and diarrhoea.

The patient has also had more or less icterus of late. The explanation of this probably is, that having a gastritis or a gastro-duodenitis jaundice has been caused either by obstruction to the passage of bile or extension of the inflammatory action along the duct. Cirrhosis of the liver, as a rule, does not give rise to icterus. The urine, which is of a specific gravity of 1014, contains bile, and also a moderate amount of albumen. The liver in this case is enlarged, and not contracted, as is usually found in cirrhosis, and I think there is good reason, therefore, to believe that there is fatty degeneration as well as cirrhosis of the liver here. The spleen is found to be enlarged, and this is corroborative evidence of the existence of cirrhosis; enlargement of the spleen being one of the ordinary concomitants of that condition.

This case, then, is one of considerable interest, first,

on account of the occurrence of delirium tremens, and, secondly, on account of the ascites. The delirium tremens has been treated with a moderate quantity of alcohol, the bromides, and, I believe, a certain amount of opium. The violent symptoms have disappeared, but you will observe that the tremor characteristic of the affection is still marked. I will not dwell upon this feature of the case; but will pass on to the ascites, which is the topic of which I wish to speak more particularly. There is one point in connection with the treatment of this condition which I have inculcated for the last twenty years, namely, the advantage of early tapping, and of tapping frequently afterwards, if necessary; and although I have done this with all the earnestness in my power, I find that both in this country and in Europe the great mass of the profession still adopt this measure only as a last resource, when everything else has failed, and the danger to life becomes imminent from the enormous accumulation of fluid. It is only recently that I saw in the *British Medical Journal* the report of a discussion on this subject in London, in which the majority of those who spoke took this view. I have generally observed that when ascites comes on in connection with cirrhosis of the liver the quantity of fluid increases quite rapidly. The rule by which I am always governed, and which I cannot recommend to you too strongly, is this, that the moment that the accumulation becomes at all inconvenient to the patient, tapping should forthwith be performed.

The principal objections that have been urged against this plan are two in number: first, the danger of collapse if the patient is in a weak state; and, secondly, the danger of peritonitis. In regard to the first, I may say that in all my experience I have not only never seen a fatal result, but have never met with a case in which there was any alarming syncope. If dangerous syncope is apprehended, however, all risk of it can be avoided by resorting to aspiration, by means of which the fluid is removed very slowly. As to peritonitis, I have known but one instance in which this resulted from puncture of the abdomen, and this was in a case complicated with general dropsy which was caused by disease of the kidney. In renal disease, as is well known, there is a direct tendency to inflammation of the serous membranes. But even in that case peritonitis would probably have been avoided if aspiration had been employed. I usually use an ordinary trocar and canula; but the only objection that I have to aspiration is the length of time which it requires for its performance. It seems to me, therefore, that there is no weight whatever in the objections which have been made to early and repeated tapping. The remedies employed to get rid of the fluid when this is not resorted to are of three kinds: diaphoretics, diuretics, and hydrogogue cathartics. Very little reliance is ever placed in the first two of these, which are very slow and uncertain in their effects, and the chief dependence is on the third class of agents. This is more efficient, it is true, but at the same time it must be acknowledged that the action of such remedies is very depressing, and, consequently, detrimental to the general health of the patient. If, therefore, it is desirable to get rid of the fluid in the peritonæum, why not do this at once by a trifling operation which is harmless, and prompt and efficient in its action. This, it seems to me, is the view that common sense teaches us to take of the matter.

Yesterday I saw a patient whose case has been of

great interest. I was first called to see him eleven years ago, when he was forty-five years of age. Without going into any details of the case, I will simply mention that he was suffering from ascites, and, in addition, was so reduced by vomiting and the discharge of blood from the bowels that he was considered in imminent danger. Three eminent physicians were in attendance, and although the distress caused by the abdominal fluid was very great, it was decided that it would be too much of a risk to resort to tapping. At the request of the gentleman's wife I was called in consultation, and at my suggestion the tapping was made, although I did not expect anything more than temporary relief. This was certainly afforded, and during the next three months he was tapped no less than ten times, 350 pounds of fluid being removed. After the tenth tapping there occurred a moderate accumulation; but this gradually disappeared spontaneously, and to-day the patient is in good health. I might mention many other cases in which repeated tapping was attended with the happiest results; but will not take up more of your time.

Original Articles.

SOME REMARKS UPON INFANTICIDE, WITH REPORT OF A CASE OF INFANTICIDE BY DROWNING.¹

BY J. G. PINKHAM, M. D., MEDICAL EXAMINER.

THE crime of infanticide appears to be relatively a very frequent one in Massachusetts. The following figures taken from the statistical reports annually published with our Transactions will substantiate this statement:—

Years.	Deaths reported as by Criminal Violence.	Deaths reported as by Infanticide.	Percentage of Deaths by Infanticide.
1878	80	2	6.6+
1879	21	7	33.8+
1880	17	7	41.1+
1881	13	2	15.8+
1882	23	11	47.8+
Total . .	104	29	27.8+

These figures are derived from the reports of individual cases alone, and represent, probably, less than one third the work of medical examiners throughout the State. But if the statistics were complete there is no reason to suppose that the percentage of cases of infanticide would be shown to be any less. It is safe to say that more than one quarter part of the cases of criminal violence that come under our official notice are those of infanticide. Yet prosecutions for the offense are very rare, and convictions still rarer. In a large number of cases the medical evidence that a crime has been committed is conclusive, and yet but little effort, or none at all, is made to bring the offenders to justice. The indifference of the community to this shocking crime is surprising. Let an adult or a

child of larger growth be murdered, and an intense excitement is at once aroused. But if the victim be a helpless infant the utmost apathy prevails regarding the crime,—often sympathy for the criminal even in those cases, unhappily, not rare, in which the hand of a mother performs the cruel act. Many of you may recall the notorious case, so much talked about in the newspapers, of Lizzie Corcoran, who drowned her illegitimate child, a few days old, by throwing it into the dock at Lynn. The chain of evidence was complete, and, in fact, the crime was ultimately confessed, yet the case was never even tried, and the culprit got off scot-free.

The popular sentiment which places a low value upon infant life is in exact accord with that which looks upon pre-natal life as of no value whatever, and refuses to regard its destruction as a moral offense. It is probable that infanticide is made to appear more frequent of late than formerly by the operation of the law of medical examiners. Under the old system when the dead body of an infant was found it was usually viewed and ordered to be buried, no attempt being made to ascertain by an autopsy the cause of death. But the medical examiner, when called to view the body of an infant that appears to be in such a stage of development as to warrant the conclusion that it was viable, has but one course to pursue in the discharge of his duty, and that is to make an autopsy, and ascertain definitely whether the child were born alive or not, and if it were to determine the cause of death. The very fact that the body was cast out unburied is proof presumptive of violence, and compels this course of action. The medical examiner is not justified, under any circumstances, in regarding the life of the newly-born child as being of less consequence than that of an adult. In view of the great prevalence of infanticide it is, perhaps, incumbent upon us to give increased thought to a study of this crime in its medico-legal aspects. The work of the Society has been well begun by Dr. Abbott in his article on the Evidence of Still-birth, published in vol. i., No. 2, of our Transactions. A series of papers following it upon the various causes of death, natural and violent, in new-born children, including reports of cases, might be of great interest and value. As a slight contribution to the study of the subject I herewith report a case of infanticide by drowning.

On the 20th of December, 1882, shortly before noon, I was notified that the dead body of an infant had been found in a privy vault in the outskirts of the town. On my way to the place I met the city marshal, who told me that he had removed the child from the vault, and was then taking it to the police station. He said also that an Irish servant girl, the supposed mother of the child, required medical attendance, and requested me to go on and render it. On my arrival at the house a few minutes later I found the girl sitting by the stove in the kitchen. Having put her to bed (she walked up stairs without difficulty), I delivered her of the placenta and membranes, which were lying loose in the vagina. The perinæum had been torn through nearly to the verge of the anus. On being questioned the girl said that she was unmarried; that she had left Ireland eight months previously, having become pregnant before she started; that since her arrival in this country she had been at domestic service, and had not informed any one of her condition; that when labor pains came on she excused her-

¹ Read before the Massachusetts Medico-Legal Society at the annual meeting, June 12, 1883.

self from work by saying that she was ill, and went into the cellar, where the child was born at about nine o'clock; that shortly before the birth she had a desire to go to stool, and attempted to use a floor pail for that purpose; that the child was then born into the pail, and that she, thinking it was dead, carried it out, and threw it into the vault; that she then returned to the cellar, and washed the pail and the floor. At this point the affair was discovered by the family, who had watched her movements with some curiosity and suspicion.

The view of the body was held at the police station at three p. m. of the same day, and the autopsy soon after. The body was found lying in a small box upon a piece of newspaper which appeared to be quite wet with some clear liquid. On taking the body up to place it upon a table a considerable quantity of watery froth ran from the nose and mouth. The following are the essential facts in the record of the autopsy:—

External examination. Body that of an apparently mature male infant recently born. Length 51.4 centimetres; weight 8670 grammes. Surface mostly clean, but presenting *vernix caseosa* in the usual places, and a few bloody patches. Skin red and firm. Head large, dark, with small *caput succedaneum*. Face congested. Eyes closed. Scalp covered with hair. Mouth open. Watery froth issuing from nose and mouth. Nails well developed. Testicles in scrotum. Umbilical cord fresh and bloodless, fourteen inches in length; end ragged. Two and one half inches from the end the cord is half cut or torn through. Meconium about anus. Abdomen distended. Chest full. Slight rigor mortis. Surface cold.

Internal examination. Section along median line. Diaphragm at level of sixth rib. Liver deeply congested. Both lungs expanded, completely filling the pleural cavities; light pink in color; somewhat congested. The trachea was ligated, and the lungs together with the heart and thymus gland removed. The whole mass floated in water high above surface. Lungs floated in sections. A slightly pinkish froth exuded from both lungs on section and pressure in abundance. The trachea and large bronchi were filled with this froth. Large veins distended with blood. Blood fluid; no clots anywhere. Meconium in large intestines. Small intestines distended with gas. In the stomach was a small amount of liquid, like water. Bladder contained urine normal in appearance. Other organs, so far as examined, were healthy in appearance.

The conclusions derived from the examination were:—

- (1.) That the child was mature.
- (2.) That it had been born alive a few hours before the autopsy.
- (3.) That the cause of death was drowning.

The conclusions in regard to the maturity of the child and the time of the birth were established by the testimony of the mother as well as by the appearance presented by the body. If the mother left Ireland eight months previous to her confinement, and had then been pregnant long enough to become aware of it, she must have been at time when the birth took place. It needs no argument to show that the child was born alive. The complete expansion of the lungs makes it certain that respiration was performed after the entire extrusion of the child from the body of the mother, and that therefore the child was born alive in the English sense. It can hardly be disputed, also, that the cause of death

was drowning. No other theory would account for the presence of so large an amount of liquid and froth in the respiratory passages. This condition of things could only have been brought about by attempts to breathe under water. It is not to be expected that the signs of drowning in the case of new-born children will be precisely the same always as in case of adults. Those external appearances due directly to the submergence of the body are very likely to be absent. If Caspar's theory that the *cutis anserina* is due to mental shock is true, we should certainly never observe that. Neither should we expect so much pallor after a moderately long submergence; for the natural baby red is not to be as easily driven away as is the lighter hue of older persons. No deductions can be drawn, moreover, from the dark hue of the face, for this may have been the result of prolonged pressure upon the head during the birth. In that group of appearances which result from the attempt to carry on the process of respiration under water the differences to be expected would be less; yet we should hardly look for the signs to exist in the same degree as in the case of adults. The more feeble the life the shorter and less vigorous the struggle of its possessor to preserve it. The case reported, if exceptional in this respect, proves that the child was unusually strong. I place little reliance upon the minor indications of drowning as shown by the autopsy, such as the presence of water in the stomach, the fluidity of the blood, the accumulation of blood on the venous side of the circulatory system, the congestion of the lungs, etc., for the presence of liquid and froth in the respiratory passages seems sufficient in itself to establish beyond question the cause of death. This being settled, the only question remaining to be considered was whether the drowning was accidental or not. There being good reason to suppose that the mother willfully destroyed her child, she was arrested on the charge of infanticide, bound over from the police court, indicted by the grand jury, and released on bail without a hearing from the superior court. At the preliminary hearing the attorney for the defense vaguely shadowed forth two theories to account for the death of the child: one, that the mother drowned it while laboring under puerperal mania; the other, that it was accidentally drowned in the liquor amnii during, or soon after, the birth.

The first theory is not one that would have much weight with medical men; for it is incredible that a woman should develop mania after her confinement just sufficient in degree and duration to allow her to destroy her child, and that she should become perfectly sane and well a few hours afterwards, so as to show no trace whatever of the malady. Her own story, told with the object of relieving herself from suspicion, would of itself effectually dispose of this theory. The second theory is much more plausible than the first; yet there are certain circumstances which make it clear to my mind that the child was willfully murdered. In the first place the quantity and quality of the liquid in the respiratory passages of the child prove that it was drowned, not in a small pool of the discharges, but in an abundance of water. The city marshal stated that the contents of the vault were frozen; that the surface of the child was moist and steaming, but not wet. That he took it out by the feet, head depending,—an act which would allow much of the liquid in the child to escape. Notwithstanding this, and the wetting of

the paper in the bottom of the box during the journey to the City Hall, enough liquid remained to run in a stream from nose and mouth when the child was taken out and placed upon a table. Besides, the liquid was clear like water, presenting no traces of fecal matter, blood, or slime. If the girl's statement was true, that the child was born while she was sitting over a pail, we are to believe either that there was water in the pail, and that the child fell at once into it and was drowned before it had time to cry or manifest to her other signs of life, or that the breaking of the bag of waters furnished liquid enough, together with urine, etc., to drown the child. In the former case respiration must have been performed so as to completely expand the lungs in every part while the child was dropping through a space of a few inches at most. If the pail were half full of water the head would enter it at once. As the perinæum was ruptured, the extrusion of the child must have been sudden. It is not to be admitted that respiration could have been performed while the child's head was within the vagina, for the head was large, and the mother a primipara. Even if the head were extruded, and the body held back by the shoulders, attempts at respiration could only have imperfectly expanded the lungs at best. But the rupture of the perinæum makes it almost certain that this delay did not occur. We are then justified, I think, in concluding that the girl's statement was false. She could have invented such a story only with the purpose of covering up some offense of her own. Hence there is little doubt that the birth took place upon the cellar floor, and that the mother, after severing the cord with some rude instrument, deliberately drowned her child in a pail of water.

NOTES OF PROGRESS IN PHYSIOLOGICAL CHEMISTRY.

BY JOSEPH W. WARREN, M. D.

NOT the least pleasant record to be made here is the appearance of a new edition of the well-known hand-book of Hoppe-Seyler.¹ An old friend of all workers in this department, the new edition shows everywhere a praiseworthy endeavor to keep abreast of the times. Many less satisfactory methods have been omitted, and condensation practiced where permissible, and still the fifth edition contains fifty pages more than its predecessor. Without going too much into detail, we note some of the changes which are apparent even on a hurried examination of the book. There is a new and sufficiently brief chapter on testing the reaction of liquids, and in another place rosolic acid, alkanna, and tropæolin receive due attention. The new remarks on the use of the spectroscope for quantitative analysis (page 21) are sensible and to the point. There are many new chapters about the multitudinous compounds which have been found in recent years, among others acetone, hydrochinon, the various compound sulphuric acids, skatol, etc. The chapter on urea contains much new matter, and that on glycogen is enlarged, but here, as elsewhere, too little attention is paid to the difficulty of completely extracting the tissues. There is a new chapter on maltose, but the chemistry of this substance is hardly full enough. In the chapter on grape sugar Worm-Müller's

laborious investigations are fully regarded, and the chapters on the proteid bodies are full of newer and interesting details. In this, as in the previous edition, no account is given of gasometric analysis proper, a misfortune to the student surely. There is also no mention of the new cadaveric alkaloids or ptomaines, but, perhaps, these belong too much to the department of toxicology, yet hardly more so than some subjects treated in detail in the hand-book which are really the product of a kind of poisoning. Leaving captiousness aside we may say, then, that the new edition has all the clearness, convenience, and compactness which have characterized former editions, and remains an indispensable aid to all students.

Another recent book ought also to find a brief notice here, the closing half volume of Hermann's Hand-Book of Physiology.²

This division of the work was originally assigned to Huppert, but was finally taken in hand by Drechsel, who has prepared it somewhat more hurriedly than he wished, as he has explained in his little preface. The result is, however, an interesting account of the chemistry of the principal secretions and tissues, excepting the digestive and some other secretions, as the bile, which, together with the chemistry of muscle and blood, had been already considered in other portions of the book. The chemistry of the urine is given with great brevity, but very pleasantly, and special attention is paid to the new bodies, compound acids, that have attracted so much attention of late. The chapter on milk is brief, but sufficient; that on fats and similar substances exceedingly good and suggestive. The section on connective and epithelial tissues is shorter than some authors have led us to expect, but it contains the principal facts in a convenient form. It would, indeed, be difficult to write a better succinct account of these portions of physiological chemistry than Drechsel has given us in some 175 pages, of which ninety-four are devoted to urine. The directions for quantitative analysis are everywhere reduced to a minimum, and in one important case, that of dextrose, omitted altogether. The principal criticism which might be made against the book, that it tends to be too chemical and too little physiological, is disarmed by the author in his preface.

Some twenty years ago Schiff reported that the pancreatic juice or extract no longer digests albumen if the spleen have been previously extirpated. More recently it was found by Heidenhain that the zymogen, or forerunner, of trypsin is formed in the pancreas quite independently of the presence of the spleen. A couple of years later Herzen looked into this discrepancy, and decided that although the zymogen is thus produced independently its transformation into the proteolytic ferment (trypsin) depends upon a ferment furnished by the spleen. His conclusions were based upon too few observations to be altogether satisfactory even to himself, and he has therefore recently repeated them, and published the results of some twenty experiments³ which he has made. He seems to have demonstrated pretty conclusively that a proper spleen, one which is enlarged and blood containing during digestion, produces a ferment extractable with glycerine or a five per cent. solution of boric acid, which, when

¹ Handbuch der physiologisch- u. pathologisch-chemischen Analyse für Aerzte, Studierende, von F. Hoppe-Seyler. 5te Auflage. Berlin. 1883. Hirschwald.

² Handbuch der Physiologie. Fünfter Band, zweiter Theil, zweite (Schluss-)Lieferung. Chemie der Absonderungen u. Gewebe, von E. Drechsel. Leipzig. Vogel. 1883.

³ Herzen: Ueber d. Einfluss d. Milz auf d. Bildung des Trypsins, Arch. f. d. ges. Physiol., xxx., 295.

added to the extract of the pancreas, causes a very marked increase of proteolytic action. He found the boric acid useful in delaying the spontaneous transformation of the zymogen into trypsin. At first he supposed that this change was altogether prevented, but such did not prove to be the case. It seems that a shrunken and anæmic spleen is not absolutely inert, but very much less active than a healthy one. He has made no experiments on splenotomized animals which might furnish an interesting means of verification. It should be added that the effort to find the ferment in the liver and kidney led to negative results. The importance of establishing such a splenic function and its bearing on the pathology of nutrition need no comment.

In another briefer communication¹ the same author reports an interesting result of asphyxia with carbonic oxide on the formation of trypsin. Bearing in mind that the change of the zymogen was apparently affected by taking up oxygen, he thought by using some convenient reducing agent to hinder this transformation. It seems that the pancreatic extract of dogs thus killed has much less than the normal digestive power; there is less trypsin present than the condition of the animal would lead one to expect. In other words, even some of the trypsin already formed has probably been *reduced* to zymogen. Indeed, it is sometimes possible to render such an extract more active by driving out the CO with oxygen. From these and other experiments Herzen comes to the curious result that poisoning with carbonic oxide affects *only* the trypsin, while poisoning with carbonic dioxide alters *none* of the ferments.

The physiology of the saliva has lately received considerable attention from several investigators. The effect of acidification on its specific activity has been newly tested by Nylén,² who took up this question at the suggestion of Hammersten. Mixed saliva was neutralized and then mixed with hydrochloric acid in suitable dilutions (0.025–0.1 per cent.). The amylolytic power of this mixture after standing a suitable length of time, and after being again neutralized, was carefully tested. A varied control was exercised by means of an unneutralized portion, and by acid alone with starch. Nylén found that an acidity of 0.075–0.1 per cent. suffices to permanently destroy the diastatic value of the saliva. Experiments with acid and pepsin led to similar results, only the destruction seemed somewhat less easy; it required a slightly stronger acid. It seems, then, that the ferment in question (ptyalin) becomes inert in a mixture of lower acidity than we usually find in the stomach during digestion. The saccharification of the starchy foods may then continue for a certain time while gastric digestion is beginning, but only until the dangerous point of acidification is reached. Once thus destroyed, for it seems that we have to do with no mere inhibition, the neutralization in the small intestines would not recuperate the ferment. In other words, in the case of a mixed diet we are not justified in supposing that salivary digestion continues long in the stomach or is resumed in the intestines beyond. A liquid food which underwent no coagulation in the stomach might not remain long enough in that organ to become

acid, and could thus keep up whatever digestion the saliva brought with it might be capable of effecting. But such foods are not likely to cause much flow of saliva except, perhaps, when taken in small quantities and slowly, with considerable alterations of the pressure in the mouth, as in drinking from a bottle. This view had, indeed, been already pretty generally adopted, but the confirmatory evidence such as Nylén has furnished had been lacking.

A similar result is arrived at by Langley and Eves,³ but these authors differ from the Swedish investigator as to the amount of acid necessary for the destruction of the amylolytic ferments, differences, however, which do not materially affect the main question of the continuance of this digestion in the stomach. An explanation of the discrepancy seems to lie in the influence of the neutralizing acid on the proteids in the saliva, and Nylén may have neglected to allow for this, or are there national differences in saliva?

Fenwick has studied the same secretion from a different point of view.⁴ He was specially interested in examining the quantitative behavior of the mysterious sulphocyanide of potash, particularly with reference to disease. The comparison was made on colorimetric principles, using the chloride of iron, a convenient and handy method, to be sure, but open to some serious objections. Fenwick corroborates anew the view already general that the presence of this curious substance is in no way associated with defects of the teeth, and furnishes no evidence of the use of tobacco. Although the pathology of the subject does not strictly concern us here, we may add that the amount of SCyK seems to be diminished in icterus, or more exactly in those cases where the entrance of bile into the intestines is interfered with. It is also less in many diseases where the injury to nutrition is or becomes prominent, for example, constriction of the œsophagus, carcinoma of the stomach, dyspepsia, dysentery. Lead-poisoning is also said to have a similar effect. An increase is noted in cases with a tendency to great development of adipose tissue, in acute rheumatism, and in the earlier stages of all diseases accompanied by fever and inflammation, that is, before the injury to nutrition becomes prominent.

These results are said to be based on the examination of one thousand persons. Should they be confirmed an interesting diagnostic field will be opened to all but the color-blind. Ere long a compact and convenient sialoscope must doubtless be added to the physician's equipment, and a new tribe of sialologists will, perhaps, enlarge the number of specialists, and, possibly, enrich medical literature with an "Archives" and even a "Centralblatt."

— A novel mode of blood-letting is given in a late number of the *British Medical Journal* by Dr. Charles Coppinger, who relieved a serious cerebral congestion by introducing the aspirator needle into the external jugular vein, and abstracting at first four ounces of blood, and half an hour later six ounces more. The patient was a fat and plethoric lady, fifty years of age.

— Carey, the informer, who was murdered by Irish agitators, had a brain weighing sixty-three ounces.

¹ Herzen: Ueber d. Rückschlag des Trypsins zu Zymogen unter d. Einfluss d. Kohlenoxydvergiftung. Arch. f. d. ges. Physiol., xxx., 308.

² Reported from the Swedish original in Schmidt's Jahrbücher, cxvii., 226.

³ Journal of Physiology, iv., 18.

⁴ Med.-Chir. Trans., lxx., 116.

Hospital Practice and Clinical Memoranda.

KAIRIN AS AN ANTIPYRETIC IN TYPHOID FEVER, WITH CASES.¹

BY GEORGE B. SHATTUCK, M. D.,
Visiting Physician, Boston City Hospital.

THE importance attributed by the German clinicians of the present day, as represented by Liebermeister, Brand, and others, to the part played by the pyrexia in acute febrile diseases is well known. In their view the pyrexia is the exhausting factor of the disease, and if this can be controlled, eliminated, or suppressed, the disease process itself will be conducted by a more comfortable path to a speedier and safer conclusion.

This view has been hitherto regarded as false by the more prominent French clinicians, and in England and our own country, if not considered as exaggerated, has, at least, been but very partially acted upon. Whatever theory may be entertained upon this point, however, there is no question of the welcome which would be extended by the profession in all countries to an antipyretic medicine which should prove itself at once efficient, prompt, safe, and tolerably uniform in action; not too rapid in elimination; moderate in price; and reasonably easy of administration. The list of antipyretics in actual use is probably exhausted when we have named quinine, digitalis, salicylic acid with its compounds, and the application of cold in some form. None of these serve all the indications mentioned, and most of them serve several of these indications but very imperfectly. Under these circumstances the announcement about a year ago of the discovery in Germany of a new antipyretic compound of unusual force excited some little interest.

The first notice of this new compound, kairin, in this country, with which I am acquainted, appeared in the Boston Medical and Surgical Journal of December 14, 1882, in a short editorial article written by Dr. F. H. Williams. Since then it has attracted attention in other quarters, and in his report on Progress in Therapeutics in the JOURNAL of September 20, 1883, Dr. Williams gives the latest published results of its use in Germany. I know of no reported cases of its use in this country.

I ask your attention, therefore, to six cases of typhoid fever at the City Hospital this summer in which kairin was used, five of them occurring in my own service, and one in that of Dr. A. L. Mason. I am quite aware that the number of cases is too small to prove much, that they exhibit the action of the antipyretic in only one kind of acute febrile disease, and that the administration was not in all respects as well adapted to demonstrate the action of kairin as it might have been in some of the cases. But it is by comparing the results of a number of unprejudiced observers that we arrive at the truth in these matters, and these cases should at least be worth comparing with others as reported, by whose reflected light they may be illuminated.

I should have been glad to test the antiperiodic properties of kairin as well as its antipyretic, but it is only quite recently that its market price here permitted its use. As lately as last July it was sold here for

\$2.50 a drachm, but since then could be purchased in quantity for fifty cents a drachm, or a little less than a cent a grain. It is now sold for \$3.75 a drachm, and I believe that the process employed for its preparation may with an increasing demand be so improved it to be sold at a much cheaper rate, and make it considerably cheaper than quinine.

Since being provided with kairin I have not had a suitable case of intermittent upon which to test it; neither have I used it in pneumonia, for, in addition to being disinclined to use antipyretics in pneumonia except in a very limited way, such cases as occurred during a summer's service at the City Hospital pursued a perfectly regular and satisfactory course and required no active interference. I have therefore only an experience with kairin in typhoid fever to offer you, and a very limited one at that.

I have with me, and will pass around, the charts of the cases as showing more readily and truthfully than in any other way the action of the kairin. To judge from these cases alone one would be inclined to conclude, I think, that kairin as an antipyretic is very efficient, prompt, and reasonably safe in action; but that its effect passes away very quickly, its elimination being rapid; that it is not very uniform in its action, and that, as the proper dose has to be sought to a rather unusual degree in each individual case, and as the dose as a rule has to be repeated and the temperature taken at very short intervals, its exhibition is attended with a good deal of inconvenience, and should be intrusted to intelligent persons. In other words, kairin leads one to believe that a better antipyretic is possible, and that such will probably be ultimately arrived at, it may be by further experiments in the same direction which led to its discovery.

Only two of the charts show the respiration as well as the pulse and temperature; the records on all were made hourly during the exhibition of the kairin, and the dose where not specified was half a gramme, or seven grains and a half, the half dose indicated being half that amount.

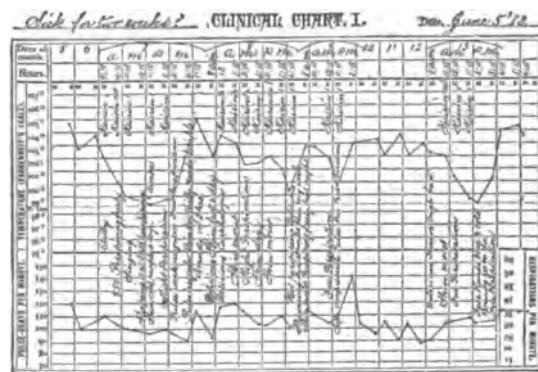
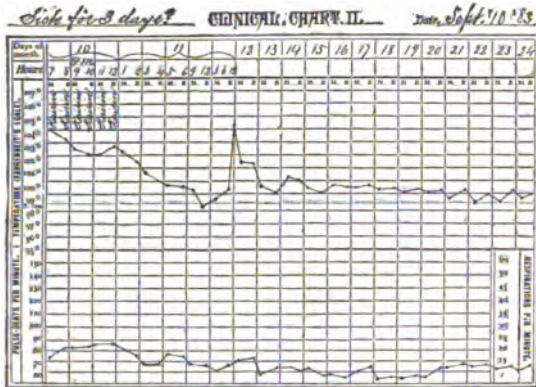


Chart No. I. represents a patient in the service of Dr. Mason, who was not naturally a strong man, and who was considerably reduced. Kairin was administered very cautiously, and yet marked depression and cyanosis resulted, necessitating quite free stimulation. Three successive full doses reduced the temperature three and a half degrees in three and a half hours, but two more hourly doses given after the lapse of an hour did not prevent its rising six degrees in two hours. The next day half doses were given, and on a subsequent day three successive full doses, again carrying

¹ Read before the Clinical Section of the Suffolk District Medical Society, October 10, 1883.

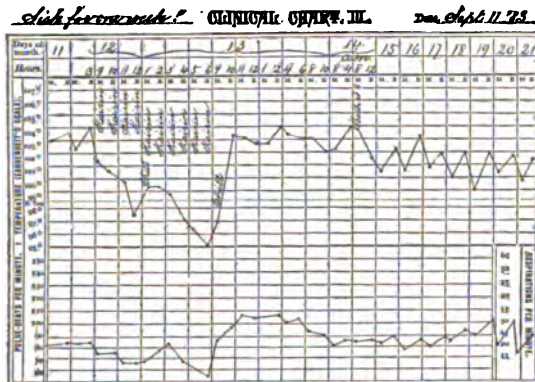
the temperature down four degrees in three hours, only to have it rise again five degrees in two hours.

Chart No. II.¹ exhibits kairin in its most pleasing aspect. The patient was a particularly robust German, — who probably had an intuition that the honor



of the Vaterland was involved, — with a temperature of 104° F., and a pulse of 75. After eight hourly full doses of kairin given between seven P. M. and two A. M., the temperature continued to fall until normal was reached at noon, the pulse falling fifteen beats. The temperature then rose five degrees in twelve hours, and then fell steadily and rapidly, not rising again above 100.2° F.

The case represented by Chart No. III. was that of a vigorous man, reported as never having been sick in

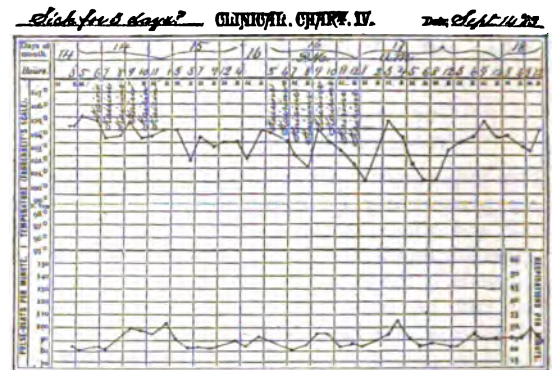


his life before. He had a very good pulse, only 85. Owing to a mistake on the part of an attendant, kairin was given ten times in succession, hourly doses of seven and a half grains, and it was not begun until two hours after it should have been. The temperature, already falling, was carried down from 101.5° F. to 95° F., and the pulse from 75 to 55, between nine P. M. and six o'clock A. M. At ten A. M. the temperature had risen to 103.5° F., and the pulse to 108. The fall and rise were each accompanied by a chill. There was marked cyanosis and cardiac depression, and stimulants and heaters had to be freely resorted to. The subsequent history of the case was normal, and the patient is convalescent.

Chart No. IV. is that of a robust man, who had been treated in the hospital last May for cerebrospinal meningitis. The afternoon of the day upon which kairin was begun, and one hour before, he had a temperature of 105° F., and a pulse of 80. Six successive hourly doses made little immediate impression.

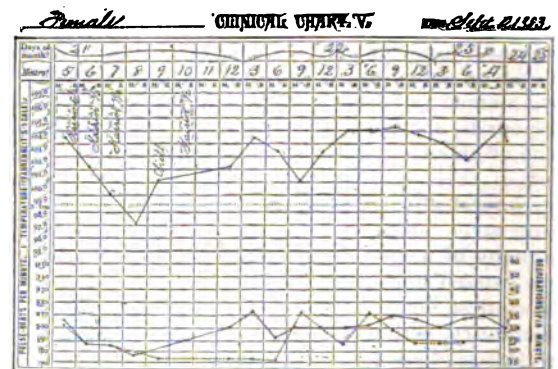
¹ By mistake in this Chart two doses of kairin are omitted.

Six hours later the pulse had fallen three and a half degrees. Two days later eight successive hourly doses

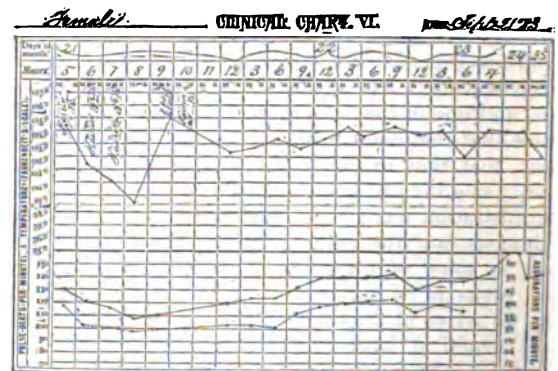


were given, beginning at the same hour, five P. M., and the temperature was carried down four degrees, but rose in two hours four degrees and eight tenths, and fell to the same extent spontaneously in three hours, only to rise again. The pulse in this case varied but little.

Charts V. and VI. show the marked effects of only three successive half doses of kairin upon women who



were somewhat reduced in strength. In these cases the pulse was reduced thirty and twenty beats respectively, and the respiration twenty points; the temperature being carried down in No. V. six and a half degrees in three hours, returning to the original point in



seven hours, and in No. VI. it fell six degrees in the same time to rise six and a half degrees in two hours.

Dr. Williams's articles, already mentioned, give all the details at present accessible in regard to kairin, with references to original sources of information. I will merely repeat, therefore, that the chlorhydrate is

a crystalline, nearly white, powder, readily soluble in water, having a mixed salt, bitter, and aromatic taste. It was, in common with other antipyretic compounds, prepared by Drs. Fischer and Koenig in Munich in the course of two years of experiments upon various imitations of the quinoline-hydrogen compound in quinine. Professor Filehne, their associate, made the first clinical experiments with it.

The method of administering it in the case of a vigorous adult is to give half a gramme every hour from four to six times consecutively until the temperature falls to 100° F., and to keep the temperature down it must be continued in smaller doses. Such an administration is accompanied by free perspiration. When the medicine is omitted for two or three hours the temperature rises to the original point or higher, and this rise is accompanied by a chill which may be regarded as an indication for renewing the kairin. An overdose causes a feeble pulse, and cyanosis of the lips and extremities,—a condition requiring stimulants. Experiments by Dr. Girat upon animals fix the toxic dose at one to two grains to the pound weight of the animal. Drs. Riegel and Seifert observed these depressing and toxic effects in pneumonia with only moderate doses. That individual idiosyncrasy and physical force must be duly regarded is sufficiently illustrated among the few cases I report. The effects of kairin are manifested rapidly, and it is found in the urine, which becomes of a dark-green color about half an hour after the first dose is taken. This coloring of the urine is sometimes accompanied by a slight trace of albumen, not differing in amount from that often found in typhoid fever. The present cases indicate that its effects pass off even more rapidly than they are produced. Apart from the cardiac depression in two cases no unpleasant results were experienced from the medicine, and this agrees with previously reported observations. In this respect, certainly, kairin seems to have a decided advantage over quinine or salicylic acid; its action, moreover, is said not to be cumulative, nor is a tolerance established in the system. As before said, the present cases lead one to suspect that it is not very uniform in its action. They illustrate its action as an antipyretic, but are not offered to show its effect upon typhoid fever.

TWO CASES OF TYPHOID FEVER IN WHICH KAIRIN WAS GIVEN.¹

BY DR. F. W. DRAPER,
Visiting Physician, Boston City Hospital.

HENRY T., aged forty, reported that he had been sick twenty days when he entered the City Hospital, March 10th. He had not been obliged to go to bed. He had had chills, anorexia, nausea, diarrhœa, and fever; scanty urine and headache with tinnitus aurium.

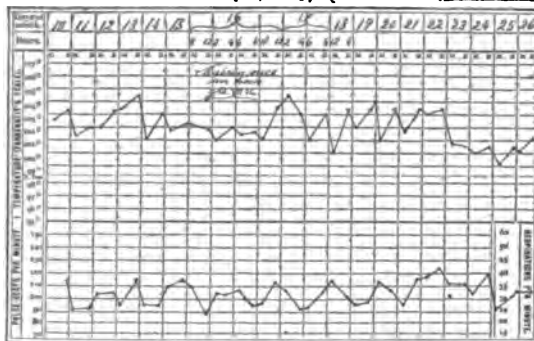
When admitted as a patient to the hospital he had headache, a compressible and dicrotic pulse, diarrhœa, tympanites, and iliac tenderness. Evening temperature 103.5° F.

During the next six days there was no noteworthy change.

On the twenty-sixth day of the disease, as the patient reckoned it, his morning temperature being

102.4° F., and his pulse 110, he had hourly doses of kairin from noon till nine p. m., half a gramme at a dose. The first effect noticed was a reduction of the temperature from 102° F. to 101° F. Three hours after suspending the drug, the thermometer registered 104.4° F. Eight hours later than this the temperature was 101.4° F. After three doses the patient

CASE NO. I. March 10, 1883.

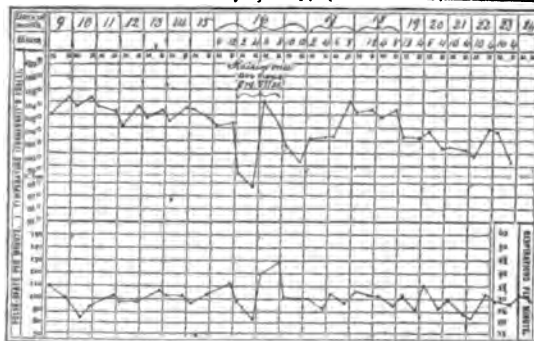


had considerable sweating, and shortly after that a chill; a second chill accompanied the rise following the suspension of the medicine. The pulse was but little affected.

The condition of the patient subsequently presented no remarkable features. Marked weakness, as shown by dicrotic and compressible pulse, was noticed; but convalescence progressed, and the patient was discharged well, April 10th, a month after his admission, and forty days after the onset of the attack.

Geo. M. M., aged thirty-five, entered City Hospital March 9, 1883, having been sick eight days. He had had chills, anorexia, headache, and the usual train of symptoms attending an attack of typhoid fever at its

CASE NO. II. March 9, 1883.



beginning. He entered with a temperature of 103° F., and a pulse of 110.

Next day (March 10th, the ninth day of the disease) he complained of abdominal pain, with moderate tenderness and tympanites. His spleen was enlarged. There was diarrhœa, with the characteristic typhoid dejections.

On the tenth day he was a little better; he had slight headache, and his diarrhœa was under control.

On the eleventh day diarrhœa returned, the dejections containing undigested milk.

On the twelfth day rose spots were observed for the first time.

On the sixteenth day his temperature was 102° F. in the morning. His diarrhœa continued. His mind was clear. His strength and general condition were

¹ Read before the Clinical Section of the Suffolk District Medical Society, October 10, 1883.

maintained fairly. His continued high temperature (as the chart shows, it had fluctuated between 104.2° F. on the day of his entrance and 102° F.) gave some ground for uneasiness, and suggested that he would be a good subject for an experimental trial of the new antipyretic, kairin. Through the kindness of Dr. F. H. Williams, a supply of the new agent was obtained, and the patient received half a gramme every hour for six hours. The effect on the temperature is shown in the chart. In four hours there was a reduction of 4.6° F., attended with copious sweating. In the fifth hour a very severe chill occurred, followed in two hours by a rapid rise of the temperature to 104° F. At the discontinuance of the treatment the temperature was 101° F. Two hours later it was 99.4° F. Eight hours after the last dose the register was 102.6° F. The pulse fluctuated with the temperature, but the disturbance was less in the pulse than in the temperature. The appearance of the patient during the administration of the kairin was peculiarly distressing, his face being pinched and his expression anxious, although he did not complain of any unpleasant sensations.

Next day there was some reaction, and the temperature touched its highest point, but during the two following days there was a steady decline, and the condition of the patient was more hopeful.

Eight days after the experiment, however, unfavorable symptoms developed, diarrhoea increased, the tongue became dry, there was delirium and a marked prostration.

From this time forward the decline was progressive, and the patient died on the thirtieth day of the disease, and fifteen days after the experiment with kairin.

The autopsy discovered the usual typical ulcerations of the small intestine peculiar to enteric fever.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

OCTOBER 10, 1883. Meeting called to order at eight o'clock, Dr. G. B. SHATTUCK in the chair.

There being no pathological specimens for exhibition, the first business of the meeting was the reading of a paper on

THE NEGLECT OF EAR SYMPTOMS IN THE DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM,

by DR. G. L. WALTON, of which an abstract follows:—

The study of the ear symptoms in nervous diseases has not kept pace with the general advance in neurology during the past twenty years, although otological research itself occupies at present a front rank in scientific progress.

It is not to be expected that the general practitioner should gain a thorough knowledge of the ear, but it is unfortunate that he should neglect it entirely, as in the exanthemata, where a little knowledge of otology would sometimes prevent, for example, a hyperæmia from becoming a purulent inflammation, caus-

ing not only deafness, but more serious symptoms, by extension of the process. There is certainly no reason for leaving the ear entirely out of consideration in the diagnosis and scientific study of nervous diseases. The eye has been so carefully studied for some time among neurologists that the diagnosis of locomotor ataxia or cerebral tumor without ophthalmoscopic examination is the exception, and the symptom "blindness" without further explanation would be considered an absurdity. Although we cannot assume that an equal amount of advantage is to be expected from the study of the ear, there is certainly much to be gained, and it should not be altogether neglected.

As an example of the practical value of adding otological to neurological study may be mentioned the recent investigations into hysterical deafness, which have shown that it has pathognomonic characteristics, the hearing through the bone disappearing first, then that for high tones. A knowledge of these characteristics is not only of value in diagnosing simple hysteria, but also medico-legally in examining the hysterical symptoms following railway and other injury, as pointed out especially by Dr. J. J. Putnam¹ and the reader. A case has, however, been recently reported by Landan and Remak, in which left-sided hemianæsthesia of hysterical origin was accompanied by deafness on the opposite side. No examination of the ear was made and the hearing was only tested by the watch, and that only in the air, so that the right-sided deafness may as well be attributed to middle-ear disease, for example, as to the hysteria, though no conclusions at all can be drawn from such incomplete evidence.

A systematic review of published cases in German, French, English, and American journals shows that while the eye is rarely, the ear is generally, left out of consideration in diagnosing cerebral disease. The cases in which the ear is neglected may be classed as follows: (1) Those in which no note whatever is taken of the condition of the hearing, although the presence or absence of deafness would be of diagnostic value; (2) cases in which deafness is mentioned as a symptom in nervous disease without sufficient examination to exclude disease of the ear itself.

(1.) The first is by far the most numerous class, and includes, perhaps, the large majority of cases of cerebral lesion, such as tumor, hæmorrhage, and abscess, to say nothing of hysteria and allied disturbances. Why the auditory nerve should be left out in the otherwise systematic analysis of such cases is not clear. The presence or absence of deafness would be of importance, for example, in question of lesion of the pons or cerebellum. Seymour² has recently reported a case of cerebellar tumor pressing on the pons, in which deafness by air and bone added much to the certainty of the diagnosis afterward corroborated by autopsy. Although this case comes under the second class mentioned in that no examination of the ears was made, the probabilities were in favor of the tumor as the etiological factor, and the case is quoted because Nothnagel in his text-book on diagnosis of cerebral diseases states that no case of deafness is on record resulting from cerebellar disease. The same writer states that the auditory nerve is not often affected by tumors and hæmorrhages of the pons, basing this opinion on the

¹ Boston Medical and Surgical Journal, September 6 and October 11, 1883.

² Boston Medical and Surgical Journal, August 30, 1883.

fact that deafness is rarely mentioned in reports of such cases. He says himself that the fact is remarkable, considering the situation of the auditory nerve. The most probable explanation of the seeming rarity of deafness in cases of disease of the cerebellum and pons is that it is seldom sought for, deafness being a symptom which often eludes the observation of both patient and physician, because fair hearing in one ear usually suffices until special attention is called to the subject.

(2.) Deafness is frequently mentioned as a symptom of nervous disease by observers otherwise most accurate, with no examination or only superficial examination of the ear, so that the reader is often left in doubt as to whether the deafness is really due to the nervous lesion (tumor, locomotor ataxia, etc.), or to a plug of cerumen or catarrh of the middle ear. In exceptionally careful reports sometimes occurs the statement, "membranes normal," but apparently normal membranes may coexist with extensive disease of the middle ear. In such cases the hearing through the bone is of great value, for this is generally apparently increased in disease of the middle ear and diminished or lost in case of nervous lesion.

Even when disease of the outer and middle ear is eliminated we are not justified in jumping at once to the brain, as there still remain the inner ear and the course of the nerve fibres to the brain. How unscientific, therefore, is the record of "deafness" among the symptoms of cerebral tumor or locomotor ataxia without further particulars.

Amongst other inaccuracies may be noticed the fact that the patient's own statement is often relied on in eliminating the question of deafness as a symptom. The patient's statement that he hears well is, however, of absolutely no value, a total deafness of one ear going sometimes unnoticed for an indefinite length of time until suddenly revealed by accident, as by rolling over upon the well ear in bed.

Even the regular tests by the voice, tuning-fork, and rods are subject to such inaccuracies as to require careful study and repetition in the given case. Deaf children are often brought to the aural clinics who not only deceive their parents, but who would deceive the medical practitioner unless he exercised great care, because they turn so quickly when a noise is made near them that it seems as if they must have heard it. The same children will, perhaps, take no notice of the shrillest sound if made stealthily behind the head by an experimenter who remembers that the field of vision extends laterally over not far from 180 degrees when the head remains quiet, and much farther when it is continually in motion.

As an example of lack of care in eliminating disease of the ear itself as causing deafness, cases of locomotor ataxia, notwithstanding the efforts of Professor Lucae, have been repeatedly mentioned with deafness as a symptom, and with no examination, or the most superficial examination of the ears. If the ears were carefully examined the cases of deafness as a symptom of locomotor ataxia would probably be reduced to a minimum.

The reader has failed, indeed, to find a single case during a careful search through forty cases, most of the patients being more or less deaf. "Menière's disease" is often diagnosticated with no examination of the ears, while the so-called Menière's complex of symptoms is so common in disease of the middle and outer ear as to

reduce greatly the number of cases in which otologists attribute them to nervous lesion.

It is not the object of this paper to contend that the skill of an otologist should be added to the requirements for neurological training. It is rather to offer the suggestion that the ear deserves an interest at least approximating that accorded to the eye in the diagnosis of nervous diseases. It would certainly be desirable that every practitioner, whether neurologist or not, should practice the examination of the ear and hearing to such an extent as to avail himself at least of the aid gained from the appearance of the membranes, the patency of the Eustachian tubes, and the hearing by air and bone by the various tests, as well as the hearing for different tones, before making a diagnosis of lesion of the nervous auditory apparatus. And further, it is to be hoped that the time is not far distant when reports of cerebral disease ignoring the condition of the hearing and the examination of the ears will be considered as incomplete as they are at present without record of the condition of the eyes.

DR. C. J. BLAKE said that, in addition to the general interest of Dr. Walton's paper, his remarks point a moral, namely, the dependence of specialists in medicine upon each other; for, while in investigations in physics special students pursuing parallel lines of research help each other to draw cross inferences, in medicine the lines of research in different departments are constantly coinciding, the cross inferences are already drawn by nature. The research of each specialty, therefore, complements and enlarges that of the others, and herein lies one of the safeguards against the narrowing tendency of specialism.

Dr. Walton's paper also contains an important hint to otologists in regard to the investigation of those disturbances of function which may be due either to an affection of the middle or the internal ear, or to both combined; a review of records of aural clinics during the past fifteen years, for instance, shows that the percentage of cases recorded as "disease of the inner ear," or as "nervous deafness," has steadily decreased, this decrease is due to the advancement in the knowledge of diseases of the external and middle ears, the sound-transmitting portions of the organ of hearing, making possible the proper classification of many diseases which were previously relegated to the limbo of "nervous deafness" for want of better knowledge. While the great progress which otology has made during the past fifteen years has been in the study of the middle ear principally, enough has been done and is doing in the investigations of the relations of the ear to the brain to show that the advance of the future is undoubtedly to be in the direction of neurological research.

DR. B. O. KINNEAR inquired the seat of the cerebral centre of the auditory nerve.

DR. WALTON said it was supposed to be situated in the first temporo-sphenoidal convolution. Functional disturbances of this portion of the brain may be accompanied by impairment of the sense of hearing. In a recent report in one of the journals was the diagram of an abscess occupying the exact seat of the auditory centre, but no allusion was made to the condition of the auditory function. Concussion of the cerebral substance has been followed by temporary disturbance of hearing, whether by vaso-motor or molecular disturbance is uncertain.

DR. GEORGE B. SHATTUCK read the next paper, upon the subject of

KAIRIN AS AN ANTIPYRETIC IN TYPHOID FEVER, WITH CASES.¹

DR. F. W. DRAPER read an account of two cases of typhoid fever also treated by kairin,² and expressed the opinion that thus far the employment of this new substance has not been followed by better results than have attended the use of the more common agencies for the treatment of fever, which latter if less energetic in lowering the temperature are followed by no alarming symptoms, while in certainly one case in which kairin was administered the immediate effects of the drug were dangerous to the life of the patient.

In reply to Dr. J. P. Reynolds, who asked the further history of Cases IV., V., VI. of Dr. Shattuck's report, the latter explained that the cases were not given in full as his object was not to report cases of typhoid fever, or even of the effects of kairin upon the disease, for which purpose its exhibition had not been sufficiently long continued, but merely to report without prejudice practical tests of the action of the new remedy upon the *pyrexia* of typhoid fever and upon the patient as an individual. Dr. Shattuck did not think the course of the disease had been really modified in any of these cases, with the exception possibly of No. II., and in that the modification attributable to kairin may have been more apparent than real. This patient experienced a relapse after two weeks of continuous convalescence. In Cases I. and III. the kairin produced great depression of the patient's strength. The lips became pinched, the extremities were livid, and the respiration embarrassed. One of the female patients was also very much depressed by the drug.

DR. REYNOLDS remarked that it is strange that any medicine should cause a sudden and great decline in the temperature, to be followed immediately by a rise to even a higher degree than the original temperature.

The greatest benefit which is at present apparent from the action of this drug seems to be that which is obtained from the temporary reduction of the temperature, for it is now an accepted fact in all febrile diseases that the condition of the patient is always more hopeful when there are remissions in the temperature than when the high temperature is continuous.

DR. SHATTUCK said that in some of the cases in which the temperature was high, even 105° F., the pulse presented no corresponding rate of frequency. Antipyretics were not called for by the actual severity of the disease, but the drug was administered in order to give these patients all the benefits of recent therapeutics.

DR. REYNOLDS observed that ordinary cases of typhoid seldom call for the employment of antipyretics or for any marked or special treatment. Such patients do very well under careful nursing with very little medication.

In answer to Dr. E. G. Cutler, the reader said that the peculiar dark-green color is the only gross evidence of the elimination of kairin by the kidneys, and there is nothing characteristic about the perspiration. A quantitative analysis of the urine was not made, and the trace of albumen found is common in typhoid or other fevers.

The German description of the action of the drug was pretty closely reproduced in most of the cases here reported.

¹ See page 415 of this number of the JOURNAL.

² See page 417 of this number of the JOURNAL.

NEW YORK ACADEMY OF MEDICINE.

THE PROPOSED AMENDMENTS TO THE CONSTITUTION AND BY-LAWS LOST.

ONE of the largest meetings ever assembled in the halls of the Academy was held on Thursday evening, October 18th, when final action was taken on the amendments to the Constitution and By-laws recently proposed by the President, Dr. Fordyce Barker. In accordance with the arrangement made at the last meeting, the Academy first went into committee of the whole for further discussion of the amendments, with DR. ELLSWORTH ELIOT in the chair.

DR. AUSTIN FLINT, JR., was the first speaker. He had very little to say, he remarked, except a few words of an explanatory nature similar to those which he had uttered at the meeting two weeks before. He still thought there was not the slightest necessity for discussing the proposed amendments either in the Academy itself or in committee of the whole, and it seemed to him and to others that there was no reason why a scientific paper should not have been read before the Academy at the last meeting instead of taking up valuable time with a discussion upon a matter upon which no action could then be taken. It would have been sufficient to announce that certain changes were proposed in the Constitution and By-laws, on which a vote would be taken at the following meeting, and then the scientific business might have gone on as usual. He humbly submitted that both the mover and seconder of the adoption of the amendments were clearly out of order in the addresses which they made at that time, for the reason that there was nothing before the meeting, since the question of the amendments could not legally come before the Academy until the present occasion. He was simply the spokesman, he continued, of a certain number of gentlemen who believed that the welfare of the Academy would be best promoted by adhering to its Code of Medical Ethics, which was that of the American Medical Association. The issue was perfectly clear to every mind, and he did not believe that any amount of eloquence would convert those misguided members who wished to do away with that. The amendments had one great object in view, and that was the elimination of everything which related to medical ethics, and every Fellow who was an upholder of the National Code would vote against them, while every one who was in favor of the new Code would vote for them. Their adoption would leave the Academy with no code at all, and that he considered even worse than to adopt the new Code. Dr. Flint then called attention to two of the proposed amendments in regard to the Council, one of which took away from it the power of appointing delegates to other societies (which was simply making a virtue of necessity, since if the amendments were adopted such delegates would not be received), and the other of which reduced the quorum of the Council from nine to five members, which, considering the number and importance of the functions belonging to that body, he believed to be exceedingly objectionable. He then went on to say that he was informed that at no time in the history of the Academy had any amendments to the Constitution and By-laws ever been adopted which had not first been indorsed by the Council, and also that at no time in the history of the Academy had a recommendation from the Council failed to be acted on. At the last meeting a dignified

protest against the passage of the proposed amendments had been communicated to the Academy by the Council, and it had not even received the scant courtesy of a motion that it be placed on file. In conclusion he said that he and his friends desired to preserve the Constitution and By-laws as they are, and that as they had registered more than one fourth, not of those present, but of the entire membership of the Academy, it was ridiculous for any one to suppose that the amendments could receive a three-fourths vote. He then moved that the committee of the whole should rise, and this was carried.

The chairman of the committee, DR. ELIOT, made his report, and DR. CARPENTER, the secretary, read the resolutions recommending the adoption of the amendments which had been passed by the committee when in session at the last meeting.

DR. FLINT, JR., moved that the report of the committee of the whole be laid on the table, on which motion DR. D. B. ST. JOHN ROOSA called for the ayes and nays. The PRESIDENT decided that the register on which the members had inscribed their signatures on entering, instead of the roll of the Academy, should be used in calling the names. This decision was appealed from, but was sustained by a vote of eighty-eight to eighty-four. The ayes and nays were then taken on the motion to lay the report of the committee of the whole on the table, and it was lost by a vote of ninety-six to one hundred and fourteen.

DR. A. L. LOOMIS then moved that when the vote was taken on the adoption of the amendments it should be by ballot, and DR. AUSTIN FLINT, SR., moved as an amendment to this that the question of the adoption of the amendments be indefinitely postponed. The ayes and nays were called for on the amendment, and it was found to have been lost by a vote of ninety-five to one hundred and seventeen. A motion was then passed to proceed with the balloting on the question of the adoption of the amendments, and the chair appointed Drs. Nicoll, Lewis, and Jacobus tellers. The result showed one hundred and twenty-one votes in favor of the adoption, and ninety-two opposed.

DR. BARKER, after announcing that the amendments were defeated (having failed to receive a three-fourths vote), which he said he did with much pain and regret, remarked that he trusted that all bitterness and ill feeling would now be forgotten, and that all the members would henceforth devote themselves with renewed energy to the scientific work of the Academy, and to the development of its library.

DR. LOOMIS then offered a resolution to the effect that the resolutions of Dr. Austin Flint, Jr., which were adopted last spring, providing that every candidate for membership should be required to subscribe to the Code of Ethics of the Academy, should be rescinded. After he had made some remarks in favor of the resolution, DR. FLINT, JR., got the floor, and claimed that the motion was not in order, since it amounted to a reconsideration of the resolutions passed last spring, and at the time they were adopted it was voted that their reconsideration should be indefinitely postponed.

The CHAIR decided that Dr. Loomis's resolution was in order, and Dr. Flint, Jr., having appealed from this, the decision was sustained by the Academy. After remarks in support of the resolution by Drs. Roosa and Agnew, it was put to vote and carried, and the meeting adjourned.

The Academy is thus left in precisely the same position as regards the Code of Ethics as it was last spring before the adoption of Dr. Flint's resolutions. At this meeting both sides made every effort to secure as large an attendance as possible, and there were about 100 "old Code" men to 121 "new Code" men present. The result of the votes show a slightly less number of the former than this figure, but this was because Drs. Alonzo Clark, Frank Hamilton, and several other of the older men on that side were obliged to leave before the voting was reached on account of the lateness of the hour.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK. ANNUAL MEETING.

ELECTION OF OFFICERS.

IN consequence of the immense attendance at the ninety-eighth annual meeting of the County Medical Society, it became necessary to "hire a hall," as the ordinary place of meeting would have proved entirely too small. Accordingly the large hall of the Young Men's Christian Association, on the corner opposite the College of Physicians and Surgeons, was secured, and it was found when the votes were counted that no less than 599 ballots had been cast. The result was a decided victory for the "New Code" ticket; but the majority would have been nearly one hundred smaller had it not been that on the very night of the election there were elected over eighty new members, who, with possibly one or two exceptions, had been expressly brought into the Society for the purpose of casting their votes for this ticket. A motion to lay the election of these new members on the table until after the election of officers, which was made by Dr. A. Flint, Jr., was voted down by the New Code party.

Dr. Van Der Poel received a majority of 155 votes over Dr. Thomas, the candidate for President of the "Old Code" side, and the entire "New Code" ticket was elected, as follows:—

President, Dr. S. Oakley Van Der Poel; Vice-President, Dr. Andrew H. Smith; Secretary, Dr. Wesley M. Carpenter; Assistant Secretary, Dr. Charles H. Avery; Treasurer, Dr. Orlando B. Douglas; Censors, Drs. F. R. Sturgis, David Webster, Daniel Lewis, F. R. S. Drake, and Joseph W. Howe. Brevet Lieutenant-Col. Bennett A. Clements, Surgeon United States Army, now stationed in New York, was elected an honorary member of the Society, and two amendments to the By-laws were adopted. The first was in reference to some details in the application of candidates for membership, and the second was as follows: "No member of this Society shall assume any sectarian designation indicating that his practice is based on any special doctrine or dogma, or specified method of treatment."

At one time during the evening something of a sensation was created by the inquiry of one of the members, Dr. Oberndorfer, whether bribery were sufficient ground for challenging a vote in the election. If such were the case, he said, he was prepared to challenge the votes of all the new members. He afterwards explained that he did not mean to impeach any of these gentlemen, but that he had positive proof in his possession that a certain member of the Society had attempted to

use bribery in inducing a physician (not a member) to join the Society in order to vote for one of the tickets that was up for election.

On motion of Dr. F. R. STURGIS the matter was referred to the *Comitia Minora* with full power to investigate.

EXPULSION OF DR. H. H. KANE.

In accordance with a recommendation of the *Comitia Minora*, Dr. H. H. Kane was expelled from the membership of the Society by a unanimous vote. Charges had been preferred against him for publishing a work of improper character on spermatorrhoea, the opium habit, and similar subjects, and these had been referred to the Committee of Ethics, who summoned him to appear before them. He refused to do this, but an investigation was made which left no doubt of the truth of the charges.

TREASURER'S REPORT.

From the report of the treasurer, Dr. O. B. DOUGLAS, it appeared that the receipts of the Society during the year had been \$3660, and the disbursements \$3668.50; while the balance remaining in the treasury was \$235.43.

ETHICS.

The Committee on Ethics, Dr. CHARLES S. WARD, chairman, reported that but three cases had come before them since the last annual meeting. One of these had been disposed of by arbitration, and the other two had been referred to the *Comitia Minora*.

PRIZE ESSAYS.

Dr. A. E. M. PURDY, from the Committee on Prize Essays, reported that but one essay had been presented, and that the merit of this had not been deemed sufficient to entitle it to the award of the prize. Its subject was, Tubercles of the Breast.

REPORT OF BOARD OF CENSORS.

The report of the Board of Censors, which was read by the secretary, Dr. H. B. CONRAD, showed that the Board had been steadily carrying on the work of causing compliance with the law of 1880, and that it had also succeeded in the important undertaking of closing a bogus school, the United States Medical College. This institution had been successfully prosecuted in two courts, and, owing to the representations which had been made to him by the Board, the Governor had promptly vetoed a bill passed by the Legislature to confer a charter upon it. It had been demonstrated beyond question that the law of 1848, under which it claimed a legal status, never contemplated the establishment of medical colleges at all, and that in the State of New York medical colleges did not come under the head of benevolent and charitable institutions. The report recommended, in conclusion, that the law should be amended so that all those coming to New York from other States to practise medicine should be required to pass an examination, whether they had diplomas or not. At present the only requirement for registration as practitioners for those holding diplomas is that the latter should be indorsed by some legally constituted medical college.

The report of the counsel for the Society, EDWARD C. RIPLEY, Esq., was appended to that of the Board of Censors, and in it he gave a résumé of the prosecutions continued or begun during the past year. In no class of cases, he said, were there so large a proportion of convictions secured as in those brought into the courts

by the Censors of this Society. In some instances, however, the course of justice had been thwarted by unprincipled parties, and the conduct of the New York Eclectic Medical College had been particularly disgraceful in this respect. In no less than five cases had this institution indorsed the diplomas or licenses of notorious charlatans while they were actually being prosecuted for practicing illegally, and thus put an end to the proceedings.

THE GRANTING OF MEDICAL DIPLOMAS.

The following communication from the West Chester County Medical Society was read and referred to the *Comitia Minora*:—

WHITE PLAINS, NEW YORK, September 26, 1883.

DR. W. M. CARPENTER, Secretary Medical Society of the County of New York. — At the annual meeting of the Medical Society of the County of West Chester in June last, the Board of Censors presented the following resolutions, which were adopted:—

Resolved, That the representatives of this county in the State Legislature be requested to urge the passing of an act to prohibit all medical colleges from granting diplomas, and requiring all candidates for the degree of Doctor of Medicine to appear before a State Board of Medical Examiners, who shall recommend successful candidates to the Regents of the State University for a diploma.

Resolved, That the secretary send a copy of this resolution to the members of the Legislature from this county, and to every County Medical Society in the State, and urge them to take the same action.

We think this resolution expresses the universal sentiment of a profession crowded with those who have virtually bought their diplomas. Let us earnestly coöperate to obtain the desired legislation. Please inform me of the action of your Society.

N. F. CURTIS, Secretary.

Dr. JOHN C. PETERS, chairman of a committee to investigate the subject of

SCARLET FEVER IN HORSES,

then made a report. He said that the committee had been appointed only in April last, and, consequently, had had but little time to do much satisfactory work; but he believed that there was no kind of doubt that scarlet fever did exist among horses, that it had done so from time immemorial, and that it was at present to be found among the horses of the city of New York. Its diagnosis, however, was apt to be attended with great difficulty, and many veterinary surgeons, among whom was Dr. Liantard, a member of this committee, denied the possibility of its occurrence. Still, the great weight of authority on veterinary medicine was in favor of its existence, and Dr. Peters quoted from an elaborate work by Robertson. The reason that so few cases of the disease were seen, he continued, was because almost all horses suffered from it in their youth, at the time of their first exposure to the bad hygienic conditions of large stables, where the true nature of the affection was not recognized on account of its being masked by the more pronounced symptoms of other disorders contracted and occurring at the same period.

In modern times the first to call attention to scarlatina in horses was Dr. Percival, a noted veterinary authority, who wrote in 1834. Dr. Copeland, the author of the well-known medical dictionary, had then taken up the subject with enthusiasm, and as the result of his investigations stated that it was a modern disease, which originated in the horse and had been communicated from the horse to man. It had now been conclusively demonstrated, Dr. Peters went on to say, that the first mention of scarlet fever in

horses was in 1514, while the first mention of its occurrence in man was not until nearly a century later, in the year 1610.

The next point to determine was, could the virus from the horse when affected with scarlatina be used to protect the human subject from the disease? Dr. Stickler, to whom the profession was indebted for calling attention to this important subject, was, he believed, on the eve of establishing that such was the case; and he hoped himself to live long enough to see inoculation as a protection against scarlet fever as commonly practiced as vaccination. Dr. Stickler had for some time been successfully experimenting with young colts. In conclusion, he trusted that the Society would devote some attention, at least, to the subject, and would do what it could to uphold the hands of Dr. Stickler, who was sure to meet with plenty of indifference and opposition in his work. On motion of Dr. Peters, the committee on this subject was increased to five, with power to accept resignations and fill vacancies.

So large was the number of votes cast, and so long did it take the tellers to count them, that it was considerably past midnight when the result of the election was announced and the Society adjourned.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY EVENING, September 13, 1883. The President, DR. TYSON, in the chair.

SPECIMEN OF VERY LARGE ULCER OF THE STOMACH, WITH UNUSUAL FEATURES.

Presented by CHARLES W. DULLES, M. D.

The specimen which I have to show you came from the body of a patient of Dr. Edward L. Anderson, who had had Dr. J. H. Musser to see her in consultation during life, and who asked my assistance in making the post-mortem examination, because of Dr. Musser's temporary absence from the city. To the clinical notes of Dr. Anderson, and my notes of the autopsy, Dr. Musser will, no doubt, add his own impressions of the case, which has appeared to me to be of singular interest and instructiveness.

The following are Dr. Anderson's notes:—

Mrs. M., aged thirty-five years; her husband living; the mother of five children, one of whom died of stricture of the pyloric or cardiac end of the stomach. Both her parents died before their fiftieth year.

May 12, 1883, at my first visit she was confined to bed, and stated that since the birth of her last child she had not been well, having more or less dyspepsia, and growing steadily worse for the last six months. She complained of a constant burning pain in the region of the stomach which nothing seemed to relieve. She vomited daily, sometimes immediately after a meal, but oftener not until evening, when it seemed to her all the food she had taken during the day would be ejected. The matter vomited was intensely sour, dark, and frothy, having the appearance of yeast. There was always pain after vomiting, and at all times irregular pains over the abdomen. She was anæmic, emaciated, and had a weak but regular pulse. Upon physical exploration I could find no tumor. Her heart and lungs were normal, and, as I afterwards learned, the

urine likewise. The abdomen was resonant. She was placed on a milk diet, with pepsin and ten drops of sulphurous acid every three hours. She took two quarts of milk daily, and did not vomit until the 22d of May, — a period of ten days. On this day she vomited but a small quantity of food.

May 23d, the period of her menstruation (though not menstruating from April until the time of her death), she ate, on her own responsibility, a fritter for supper. This indiscretion brought on an attack of vomiting and sufficient prostration to cause considerable alarm to her family and cause them to send for me. I found her much exhausted, only able to speak in monosyllables, with a pulse of 104, and respiration 40. She complained of intense, burning pain in the stomach. External heat and sulphurous acid internally gave relief. This was the first time I was able to see the vomited matter, and I found it to be digested blood, about two quarts in amount. Dr. J. H. Musser kindly examined the material microscopically and found blood corpuscles, pus globules, and epithelial cells. I was told she had vomited similar material prior to my first visit. The vomiting was repeated on May 25th, 26th, 27th, and 28th, and several times there were free hæmorrhages. She was treated with bismuth and carbolic acid, with enemata of milk, whiskey, and eggs, and inunctions of cod-liver oil. Hæmorrhages occurred again on June 6th, 7th, and 8th. On June 10th Dr. J. H. Musser saw the case in consultation. He thought he detected a tumor. We came to no positive diagnosis, but wavered between carcinoma and ulcer. It was only when the patient was placed in the knee-elbow position that a tumor could be felt, and this a little to the right of the median line. The treatment was changed to one drop of hamamelis every twenty minutes, and a pill, containing one fourth of a grain of oxide of silver, three times daily. June 17th and 18th hæmorrhages again occurred; but from this time until her death, about six weeks later, there were no more hæmorrhages, little inclination to vomit, and very little pain. This was notwithstanding the fact that I have reason to believe that for about a month before her death she paid no particular attention to her diet, while the only part of the treatment carried out was the taking of the oxide of silver pill. About three weeks before her death a troublesome cough set in, but it was easily controlled by opium. Her death followed a large meal and free draughts of coffee and water. The act of death was quiet and gradual, entirely unaccompanied by pain or alarm.

The notes of the autopsy are as follows:—

September 2, 1883. Body of Mrs. M.; aged thirty-five; thirty hours after death, rigor mortis absent, body much emaciated, right hand puffy with œdema, bruise over middle of right shin. Examination of thorax, abdomen, and pelvis.

There was no fluid in either pleural cavity. Both lungs were attached, at the upper part, to the parietal pleura by adhesions which broke down easily. The upper lobe of each lung was pretty well solidified with chronic catarrhal deposits, quite soft. In each upper lobe there was a cavity. That in the right lung was as large as a hen's egg, that in the left about the size of a pigeon's egg. Both were ragged and contained dirty grayish detritus. The lower lobes of both lungs contained a number of small nodules of caseous degeneration.

The heart was very small and firm, about the size of

a goose-egg. Its valves were normal, and it contained but a small quantity of fluid blood in its right cavity.

The abdomen contained about a third of a pint of slightly turbid serous fluid. There was not the slightest injection of the peritoneum anywhere, nor any other evidence of peritonitis. The pelvic organs were all normal in appearance, except the uterus, which, though of normal size, was in a state of marked retroflexion. The bladder contained about two fluid ounces of urine. There was no omental apron. The liver was of normal size and appearance. The gall-bladder was normal in appearance, and contained about half a fluid ounce of saffron-colored bile, but no gall-stones. The spleen was normal. The kidneys were of normal size, rather hard, their capsules adherent, their surface a little granular. On section their cortex was found somewhat diminished. The supra-renal capsules were very tough, the right more so than the left. The pancreas was of normal appearance at its left end, but at its right it was attached to the stomach, and was decidedly indurated. Here it was imbedded in a quantity of delicate adhesive bands, which united into a bundle its own duct, the end of the ductus communis choledochus, and the pyloric end of the stomach. The intestines were collapsed and empty, except the duodenum, which contained a small quantity of thick bile-stained chyme.

The stomach itself presented the features of the greatest interest. It was much enlarged by dilatation, its walls were thin and pale, its vessels along the greater curvature much enlarged and full of dark blood. It occupied a slanting position, from above downwards and from left to right. It contained about *two quarts* of grumous, sour-smelling, fluid ingesta, and with this it was not nearly filled. At the upper part of the pyloric entrance it bore a firm puckered induration, looking like a cicatrix, about two thirds of an inch in diameter. Close by this was a large ulcer about two and a half inches long, and over an inch wide, with indurated, thickened, and in part perpendicular, edges. This ulcer passed through all the coats of the stomach. Nevertheless the large quantity of fluid contents of this viscus had not escaped from its cavity, because the ulcerated part of the stomach was applied against the adjacent pancreas and attached to it by adhesions. This attachment, however, was extremely delicate, and would not bear the gentlest handling. It gave way while the viscera were still in the abdomen upon an attempt being made to lift the pancreas up while the stomach was held aside. This disclosed what seemed to be a loose connective-tissue mesh between the stomach and pancreas, in which a small quantity of the ingesta was found.

The pyloric orifice of the stomach was at the edge of the induration surrounding the ulcer, and it was so contracted as to barely admit the passage of a grooved director through it.

CASE OF TUBERCULAR ULCERATION OF THE INTESTINE, WITH TUBERCULAR INFILTRATION OF THE LUNGS AND SPLEEN.

E. H., aged forty-three, married, was admitted to the Episcopal Hospital July 16, 1883. The following notes were taken by DR. GEORGE M. BOYD, the resident physician. The patient states that she has been sick since last April. Her trouble began with vomiting and purging, which it seemed impossible to check. No cough was complained of, and there appeared on admission to be no marked dullness on percussion over

either lung, but in consequence of the patient's statements a careful physical examination of the lungs was not made. She was very pale and much emaciated. At first almost all nourishment was rejected, but after a few days the stomach became more tolerant of ingesta. Pain was complained of in the left inguinal region, where there seemed to be an undue degree of fullness, but the pain was relieved by poulticing, and the diarrhoea was relieved to a certain extent by opium and astringents. Four or five thin, dark, and watery passages occurred every twenty-four hours in spite of treatment. Sometimes small clots and shreds of coagulated blood were seen in the passages.

The diarrhoea became again more profuse and the emaciation more extreme. About a week before her death patient began to complain of cough, and auscultation then revealed tubular breathing and gurgling below the right clavicle.

Death occurred on August 30th.

The post-mortem examination was made fifteen hours after death. Rigor mortis hardly yet well established. The body is extremely emaciated; the omentum being almost destitute of fat.

Heart. Weight four ounces; tissue pale.

The apices of both lungs present numerous cheesy nodules, with catarrhal pneumonic thickening. The right lung presents at its apex a cavity with smooth walls of the size of a pigeon's egg.

Spleen. Weight two and a half ounces; its section shows numerous cheesy nodules.

Left kidney. Weight two ounces; capsule adherent, and cortex diminished.

Right kidney, weight four ounces.

Liver fatty.

Small intestine almost empty and contracted; its mucous surface is everywhere injected, and about eighteen inches from the ileo-cæcal valve it presents two or three small round ulcerations, which do not penetrate quite to the peritoneal investment. Mesenteric glands everywhere swollen and veins dilated.

The large intestine presents throughout its entire extent thickening of its submucous layer and other indications of chronic inflammation. The inflammation has caused in the descending, and a portion of the transverse, colon complete, or almost complete, destruction of the mucous membrane for a space of about three feet. The muscular layers are thickened, and the mesenteric glands swollen, and there is some thickening and undue opacity of the walls of the vessels, but no tubercular granulations can be detected with the naked eye.

CASE OF CANCER OF THE LIVER.

The patient, S. A., aged sixty-five, single, was admitted to the Episcopal Hospital July 31, 1883.

The following notes were made by Dr. Claxton, the resident physician: While at work, six weeks ago, the patient began to experience pain in the epigastric and right hypochondriac regions. Two weeks later he noticed that he was jaundiced, and that there was a lump (or swelling) in his abdomen.

Upon admission to the hospital the patient was much emaciated, and very feeble; skin and conjunctivæ intensely jaundiced, of a deep saffron hue.

There was marked bulging noticed in the right hypochondriac and epigastric regions. The tumor, which could be plainly felt through the thin abdominal wall, was found to extend four inches below the xiphoid

cartilage, and two inches to the left of the linea alba. The mass occupying the right hypochondriac region was found to be distinctly nodulated, and very hard. Some of the nodules appeared to be umbilicated. The patient presented a markedly cachectic appearance; tongue thickly coated with a dirty yellowish-brown fur; his bowels were constipated, and there was anorexia.

Purgation failed to influence the size of the tumor. The patient complained of insomnia, but did not seem to suffer much. Mental action was sluggish. The patient became rapidly weaker, and for fully a week before his death it was noticed that his extremities were very cold, and fully three days before his death his pulse had become so weak as to be almost imperceptible. Death finally occurred on August 16th.

The post-mortem examination was necessarily a hasty one, as the body was removed from the hospital within two hours of the patient's death.

The new growth appeared to involve, however, only the liver and the pancreas. The common bile duct was completely occluded by a hard nodular mass which had its apparent origin in the pancreas. Above the occlusion the cystic duct and the gall-bladder were distended with dark olive-green bile.

The liver weighed five pounds six and one half ounces. Section of the organ showed complete infiltration with cancer nodules, and little or no normal hepatic tissue could be seen.

The spleen was markedly atrophic, weighing one and one half ounce.

The kidneys were deeply stained with bile, and seemed somewhat contracted.

The heart was very small, and its muscular tissue flabby.

Recent Literature.

Hand-Book of Electro-Therapeutics. By DR. WILHELM ERB. Translated by L. PUTZEL, M. D. New York: William Wood & Co. 1883. Pages xiii., 366.

This is one of the volumes of Wood's Library of Standard Medical Authors. It is scarcely necessary to say that the author is one of the best authorities on the use of electricity in diseases of the nervous system. We should, therefore, expect a correct work; the present book is also practical and simple. The physical and physiological introductions, to which the first six lectures are devoted, require only fifty-seven pages, are concise, and give what is most important for the student to know. The lectures devoted to electrical examination and electro-diagnosis are in part familiar to us in connection with the eleventh volume of Ziemssen's *Cyclopædia*, but the subject is considered more fully, as in connection with the nerves of special sense, naturally most of that lecture being devoted to the auditory nerve.

Under the title of General Electro-Therapeutics the value of electricity as a therapeutic agent, the various modes of applying it, and certain precautions, are given; then follows the part devoted to Special Electro-Therapeutics.

A few subjects often found in treatises on electricity are omitted. Nothing is said in regard to the application of electricity to surgery. Static electricity is only briefly mentioned as not having furnished very en-

couraging results, and that it "has still to conquer a secure place in electro-therapeutics." Of electric bath he says, "*A priori* it cannot be denied that the electrical bath may produce very marked effects, but the therapeutical experiences hitherto obtained are not calculated to inspire faith in its efficacy. It appears to have been most successful in certain forms of tremor, especially mercurial and alcoholic tremor, then in chronic articular rheumatism, in cerebral neurasthenia."

Of "general faradization" he says, "I have employed general faradization with sufficient frequency to satisfy myself of its decidedly favorable effects." He does not speak so warmly of "general galvanization" and "central galvanization."

The translation is well done, but in giving the formulæ for the electrical reaction of nerves and muscles the German has been translated, which gives a somewhat confusing combination of Cs. We have Ca, Cl, C, to represent the cathodal closing contraction. When, however, Ohm's law is given, the formula $I = \frac{E}{w + r}$ is used, W and w denoting the essential and the extra essential resistance. A translation into R and r would have been consistent.

L'Année Médicale (cinquième année) 1882. Résumé des Progrès Réalisés dans les Sciences Médicales. Publié sans la Direction du DR. BOURNEVILLE. Paris: E. Plon & Cie. 1883.

L'Année Médicale of Dr. Bourneville is sufficiently well known to need no especial description. The usual number of competent collaborators have taken part in preparing the present volume, and the usual plan has been followed.

It strikes us that the year 1882, with which this number deals, is rather less marked by interesting or important medical novelties than is often the case.

A Practical Treatise on the Medical and Surgical Uses of Electricity, including Localized and General Faradization, Localized and Central Galvanization, Franklinization, Electrolysis, and Galvano-Cautery. By GEORGE M. BEARD, M. D., and A. D. ROCKWELL, M. D. Fourth edition. Revised by A. D. ROCKWELL, M. D. New York: William Wood & Co. 1883. Pages xxx., 758.

It is only necessary to call attention to this book, which has been noticed when the previous editions appeared. This fourth edition is the same as the third with the addition of a few pages upon franklinic or static electricity, and a few pages in regard to extra-uterine pregnancy.

The Essentials of Pathology. By D. TOD GILLIAM, Professor of Physiology, Starling Medical College. P. Blakiston, Son & Co. Philadelphia: 1883. 296 pages.

In this book an attempt has been made to condense and render attractive a very extensive subject, and the task has been found a difficult one. A great many old names have been retained which referred to the general appearance of diseased organs simply, without reference to the process by which such changes are pro-

duced. There is also a frequent tendency to describe the symptoms observed during life, in fact to give the history of the disease, rather than appearances and their cause. It may possibly be of service to a certain class of students, but hardly contains the systematic fundamental teaching which is to be regarded as the essential of pathology.

Medical and Surgical Journal.

THURSDAY, NOVEMBER 1, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

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HOUGHTON, MIFFLIN AND COMPANY,

NO. 4 PARK STREET, BOSTON, MASS.

THE MEDICAL TEACHING OF THE FUTURE IN BOSTON AND AT THE HARVARD MEDICAL SCHOOL.

THE beginning of a new century of life and the completion and opening of a new and admirable building have given the Harvard Medical School an opportunity to call its friends, neighbors, benefactors, and prominent professional men from various parts of the country together to tell them what it has done in the past in the cause of medical education, to show them what it is prepared to do in the present, and to receive their congratulations. These have been extended in no reluctant spirit by those who were fortunately able to be present at the late ceremonies. And the full and appreciative accounts of the recent occasion contained not only in the columns of the JOURNAL and the local daily newspapers, but also in those of the other medical periodicals in larger medical centres, have practically increased many fold the number of those ready to hear and see what Harvard has to say and has done in this important cause.

Dr. Holmes sketched in his inimitable address the history of the School from its infancy, and the changes in the methods of education during the last generation. Although the festivities are still fresh in mind, and the congratulations have scarcely died away, it seems not only neither premature nor ungracious but rather a suitable moment to ask what is the tendency of the present methods, what are the weak points, — if any, — what directions the changes in medical education are likely to take in the next generation, if it is possible to forecast them. Admiration and approval of what has been done have been too warm and spontaneous to allow speculation as to what may be done to seem other than friendly.

Some of the directions in which changes will take place within the next generation are already clearly indicated. It requires but a slight acquaintance with the principal medical schools of the country to see that they have grown greatly from their small begin-

nings, and that they are by no means at a stand-still. Progress, though sometimes an irregular and uneven progress, has been the rule, and the graduate of to-day is very different from the newly-fledged M. D. of a generation ago. To confine our remarks, however, to Harvard, we may say in the first place that changes are already discussed in courses preliminary to a medical education which will have great influence upon the Medical School. The preliminary study of another generation will unite what is best in the present academic and technological schools. Modern languages will undoubtedly be more prominent; the student will enter better trained in the natural sciences; general chemistry will be relegated entirely to the preliminary course; something real will be required in comparative anatomy, botany, and physics. Not a little time will thus be gained, perhaps a full year, and the fourth year (then becoming relatively a fifth year), which is now encouraged but not required, will be an established portion of the curriculum, and in it we may see a system of electives which shall allow some choice in the study of specialties. The condition of the School itself will, we confidently believe, be entirely changed by the possession of a fund large enough to make it to a considerable extent independent of fees. Perhaps no school acts as independently to-day towards its students as does Harvard, but a great gain should take place when such independence actually exists. The establishment of scholarships will assist in maintaining a high standard, and graduate fellowships will allow the special training of men to teach in the more strictly scientific branches.

Thus much of the promised land we are permitted and encouraged to see with a certain sharpness of outline, but with the eagerness of the explorer we desire to enlarge still farther our horizon, to see dispelled the mists which veil certain features in the outlook. The new building of the School emphasizes more particularly a provision for laboratory work, the development of what are regarded as preliminary courses, the broadening and deepening of the foundation upon which the education of the physician is to be reared. The present method of class instruction is already strong, where the old apprenticeship system was weak, in the attention paid to preliminary and to laboratory work. But a school in which the influence of laboratory men is strongly felt naturally exalts still further the scientific, though a physician trained in scientific methods must still deal with the uncertain. Years ago students looked on while the professor of anatomy dissected; they looked on while the professor of chemistry did or attempted brilliant experiments; too often they still look on while the professor makes a diagnosis or prescribes. The present method of class instruction — especially as shown to exist at Harvard in a paper by Dr. E. N. Whittier recently published¹ — is greatly superior as a whole to the old apprenticeship system, but in one respect it greatly falls behind that almost obsolete system, that is in the failure to bring the great body of students into close relationship with the sick, and it is in this direction that

¹ JOURNAL, vol. cix., p. 230.

changes are most to be expected and most to be desired. Such changes are already taking place. Year by year new places are thrown open to students where they can see and examine patients themselves in return for such services as they are able to give, but this takes place in a somewhat desultory and uncertain fashion. The Faculty now recognize the necessity of making each student familiar with disease; we expect they will rise to the necessity of making each and every one familiar with the sick. At present a student who early desires to see clinical work, and is helpful and agreeable, will find abundant opportunities; and to their credit be it said a very large number seek these opportunities; they feel that they are in training for their life work, and they go about it in earnest, but some who are diffident or indolent see very little. The best men, or the most fortunate, get a training that leaves little to be desired, but it is pitiful to think how small an amount of actual experience in the care of the sick a man may have and still graduate. Time was when a man could receive his degree with only a theoretical knowledge of midwifery; that time has happily gone by. No man can graduate who has not given some practical evidence of a certain familiarity with at least some forms of disease, but the facilities for obtaining such familiarity are defective.

The chief improvement of the next thirty years will consist in reducing the clinical teaching to a system similar to that pursued in the chemical laboratory. We do not venture to predict precisely how such a system will be brought about, but it will unquestionably necessitate a more intimate union with the hospitals and dispensaries, and various ways of promoting such an end readily suggest themselves. An appointment to a hospital might be made to carry with it the obligation to give clinical instruction, the system of continuous hospital service which bears such good fruit in Europe, and which is finding favor in New York, might be introduced; such steps depend upon the favor of hospital trustees. A school may have its own hospital, as is the case with the London schools, but in such a relationship, as a rule, the hospital comes first and the school springs from it, and very large endowments are needed. It is, we believe, through the encouragement and development of extra-mural teaching, so effective in Edinburgh, in Germany, and at the Italian Universities, that we might rationally anticipate a favorable solution of the question of clinical instruction in the future at the Harvard School. It has ceased to be a school of one teacher in each branch; it has ceased to be a school of one hospital; to put clinical teaching where it ought to be it is quite time for further progress in the same direction. One school is quite enough to dispense degrees, but there cannot easily be too much clinical teaching or too many teachers. Not in *graduating* but in *teaching* students competition breeds excellence, and in this way the stimulation of two schools may be had without the evils. By far the larger part of the clinical material in Boston is still unused even during the regular educational months, and it is only within a very few years that any educational advan-

tage has been drawn from patients during the summer months, but the efforts in this direction are appreciated by students, although entirely independent of the School. Again, by extra-mural teaching not only are the advantages of the old apprentice system preserved and the student in small classes is brought into close contact with the patient and the instructor, but a large number of teachers are constantly in training from whom the School may choose future professors. The continued expansion of the City Hospital, the erection of an ample and well planned building on the grounds of the Massachusetts Hospital for its out-patient services, the commodious and convenient structure just opened by the Boston Dispensary, offer unaccustomed facilities, and even entail upon those holding appointments obligations for increased and varied clinical teaching. The School should not only recognize but we hope will encourage this, and another generation will see a great advance in the department which must always place the crown upon the medical student.

If we intimate that improvement is possible we do not fail at all to appreciate the improvements which have been made.

In teaching midwifery we have little doubt great changes will be made — approaching more nearly the continental systems — which must await the development of lying-in hospitals.

We confidently hope also to see some new method introduced in the study of therapeutics that shall put it in some way upon a par with the study of physiology, so as to put an end to the loose methods of drawing deductions as to the operations of drugs upon the animal economy, which the School already has done so much to correct.

We shall not be surprised to see more careful study of the diseases of animals contribute to the instruction of medical students. Comparative physiology is recognized as a necessary portion of the study, perhaps the basis, of human physiology; comparative anatomy is an important adjuvant in the study of human anatomy; comparative pathology and comparative therapeutics have not yet been given a similar importance. That they will reach it some time seems inevitable, whether in the next forty years is not quite so certain.

To condense our remarks, we believe something of the same practical methods will be introduced into the teaching of general practical knowledge as are now employed in teaching the preliminary and scientific branches, while not only scientific medicine but practical medicine also in its special divisions will be still further fostered by post-graduate courses.

— "Mr. George N. Chipman, in attempting to lift a huge rock, sprained the *semi membra nosis* of his left leg, causing him to be confined to his home for about a week. We are pleased to say that Mr. C. has recovered and about his business." — *Lay Exchange*.

— Tar beer for chronic laryngeal and laryngobronchial affections is used in great quantity at the Philadelphia Polyclinic.

THE STATE ALMSHOUSE AT TEWKSBURY.

THE annual report on the State Almshouse at Tewksbury, Massachusetts, for the year ending September 30, 1883, has been sent to the Governor by the Board of Health, Lunacy, and Charity, which has acted as trustees since April 28, 1883. It is accompanied by the report of the Superintendent, Dr. C. Irving Fisher, who has only been at the institution about three months. Dr. Fisher's report covers two months of his own service, and that of the Board five months of its control. The report of the Board is signed by all the members, by the appointees of the present Governor of the State, as well as by the others. Both reports are concise, business-like documents, and should be satisfactory to all citizens interested in the welfare of our State Charities but who do not think they are proper playthings for politicians and much less for demagogues.

Various minor changes have been introduced into the general management of the asylum, the most important of which we believe to be that able-bodied paupers are compelled to labor during their period of residence.

Tewksbury is, in fact, really a hospital rather than an asylum, which suggested the propriety of placing a medical man in the position of superintendent. Of the inmates Dr. Fisher says:—

"Looking at these people from the stand-point of health, we find three classes,—the sick, those in the hospitals, the feeble and deformed, not requiring hospital treatment, yet unable to work, and the well. The two latter classes are mingled during the day and occupy the same wards at night; hence the line of division cannot be distinctly drawn, and the well are constantly managing, under false pretenses, to get rid of the work which might properly be required of them. If the able-bodied are to be supported here, the force of officers should be sufficient to make them do a reasonable amount of work.

"The statistics show that there have been admitted during the year 3231. There have been supported during the year 3170, the weekly average being 956, which is 61 more than the weekly average of last year. This is due in a measure to the burning of the State workhouse."

Admission has been denied to motherless infants since October, 1879. "The hospital statistics," the report goes on to say, "show that there have been 1980 cases treated during the year, which is 321 more than appear in the tables of last year, an increase of nineteen per cent. There have been 233 deaths, which is two less than the previous year. Of these, 16 were of the insane. There have been 20 more births than last year. Considering the rapidly increasing number of patients it becomes apparent that our great and pressing need is more hospital accommodation. The wards are crowded far beyond the sanction of medical judgment. In the male hospital, because of its arrangement, we are obliged to classify patients according to their loathsomeness and excitability rather than according to their diseases. We have no wards which admit of proper isolation of

patients. Many men are now obliged to sleep in the dormitories and eat the ordinary house diet who ought to have hospital care and food. A new building is needed, and should be planned with reference to the proper separation of certain classes of disease. The present building could then be used as a convalescent ward, and would need but few changes. If a new hospital is built it might be so placed as to inclose, with its connecting corridors, a yard where the patients could be by themselves, not subject to the annoyances and temptations which come from contact with the able-bodied. There is a large number of men and women who, by reason of age or deformity, go up and down stairs with difficulty, and the present arrangement of buildings does not allow a satisfactory removal to a ground floor. Whenever changes are made this is an object which should be considered. It would be well if something in the way of entertainment could be provided for the sane and insane. This would not only tend toward happiness and contentment in the lives of these unfortunates, but would bring the officers into social relations, and develop a sympathy with one another and a kindly feeling toward the inmates, which would increase their efficiency as officers."

The adoption of such suggestions requires, not a withholding of present appropriations, or a scaling down of future ones, or even a lot of bombastic declamation, but increased expenditure of money on the part of the State and of time on the part of the resident officials. The arrangement which the Board found existing for the disposal of the unclaimed bodies of deceased inmates was in conformity with the law on the statute books, but some improvements have been brought about in the details of the system. Owing to perfected methods of refrigeration it is found feasible to prolong the time accorded for the possible reclamation of a body; delivery of unclaimed bodies in future will take place at the asylum itself, to which institutions receiving bodies for the purposes of medical instruction will be required to return the remains.

The Board justly states that the management of any State institution will always be found susceptible of some improvement, but that any serious defects in that of the Tewksbury Almshouse had been remedied prior to the beginning of the present year, and that very few of the charges subsequently made against its conduct were in fact true.

These reports tell us what Tewksbury requires as an almshouse and as a hospital, and recommendations are made to satisfy these requirements; the reflection of the present supreme executive officer of the State is not one of them, nor does the representation of Massachusetts at the late Conference of Charities at Louisville lead us to regard the omission as unfortunate.

— The quarantine officer at San Francisco is quarantining every vessel arriving in port having a leper on board. The vessel is released only upon the captain's giving a bond undertaking to return such leper.

MEDICAL NOTES.

— All the world's a clinic,
And all the men and women merely patients.
They have their exits and their entrances,
And one man in his time plays many parts; . . .
His acts are more than seven ages.

Viewed through the professional opera-glasses of a contemporary the strange, eventful history is as follows:—

First year: icterus neonatorum, hyperkinesis intestinalis, and vaccination. Second year: dentition, croup, cholera infantum, and fits. Third year: diphtheria, whooping-cough, and bronchitis. Fourth year: scarlatina, worms, and meningitis. Fifth year: measles. Now half the children are dead. Seventh year: mumps. Tenth year: chorea and typhoid fever. Fifteenth year: hyperæsthesia sexualis. Sixteenth year: spermatorrhœa, chlorosis, and spinal irritation. Eighteenth year: blenorrhœa urethralis. Twentieth year: bubo, alcoholic cephalalgia, vertigo. Twenty-fifth year: matrimony. Twenty-sixth year: insomnia de infanto. Thirtieth year: dyspepsia, nervous asthenia. Thirty-fifth year: pneumonia. Forty-fifth year: lumbago, presbyopia. Fifty-fifth year: rheumatism, alopecia. Sixtieth year: amnesia, deciduousness of teeth, bony arteries. Sixty-fifth year: apoplexy. Seventieth year: amblyopia, deafness, anosmia, general dyskinesia, atonic digestive tract, rheumatismus deformans. Seventy-fifth year: finis.

— At the annual meeting of the corporation of the School for the Feeble Minded, the former officers were reelected as follows: President, Samuel Eliot; Vice-President, Edward Jarvis; Treasurer, Frederick W. G. May; Secretary, W. Brandt Storer; Auditors, W. W. Swan, W. Brandt Storer; Trustees, Samuel Eliot, Samuel A. Green, John Cummings, Edward Jarvis, W. Brandt Storer, John D. Washburn. The reports of the trustees, of the treasurer, and of the assistant superintendent, were presented, giving the following facts: The number of children now present is 144, 89 boys and 55 girls, and the average present during the past year has been 139. There have been 61 applicants for admission, of whom 46 were admitted and the rest declined, chiefly on account of epilepsy. Epileptics are not admitted. The reports give, at some length, an account of the steady, but quiet, progress of the pupils. The farm at Medfield is a most important adjunct to the school. The large boys are employed upon it quite profitably to themselves and to the school. One item of this year's produce is 377 bushels of potatoes, and in another year the farm promises to furnish all the milk required by the institution. The laws concerning the school were materially changed by the last Legislature. Admissions are now required to be made through commitments by judges of probate in all cases where the parents cannot pay for support of their child, after the method required in the admission of lunatics to hospitals. Cities and towns are also required to pay for the support of those who have no kindred able to support them, while the State pays only for the support of those having no legal settlement. In speaking of the past and future growth of the school the report says: "We have, within the past six years, built and fur-

nished the new west wing to our buildings. We have bought our farm, stocked it, and have removed to it fifteen of our large boys,—a great relief to the school. We have carried 120 to 140 children, as against 80 previously. We have had no increase in the appropriation from the State. We have never, knowingly, admitted an unsuitable case. We have done nothing, except good work, to advertise the school, and it is to-day one of the least known of all the institutions of the State. Yet in these six years our numbers have increased from 80 to 144, while in the seventeen years immediately preceding the number had increased only from 70 to 80." The treasurer's report showed that about \$30,000 had been paid out, and although there was a small deficit caused by attempting to support more children than the appropriation would warrant, he presented a very favorable financial exhibit. The amount of the invested funds is about \$23,000. At a subsequent meeting of the trustees the resignation of Dr. G. G. Tarbell, assistant superintendent, was accepted after much reluctance on the part of the Board, and Dr. Asbury G. Smith was elected assistant superintendent.

— One hundred and eighty persons are ill and four have died in a town of the province of Saxony from an epidemic of trichinosis.

— We have received the initial number of *The Medical Student*, a new publication dated from New York, and intended for circulation among American medical schools in general.

Correspondence.

TRAINED NURSES. A CRITICISM.

MR. EDITOR, — Notwithstanding the incalculable advantages of the trained nurse over one of the old school, I have more than once been confronted with an emphatic criticism of the new school which seems to me to have much of justice in it, and for which I believe the present training in the hospitals is to be partially blamed. The criticism is this, that the trained nurses, with all their technical skill and admirable training in implicitly obeying the physician's orders, lack that minimum of culture, I will call it, and delicacy in dealing with patients of refinement and sensitiveness, which I should be inclined to regard equal in importance to their professional training, and perhaps of greater moment upon the welfare of their patients. I do not wish to be understood as making this as a sweeping criticism against all trained nurses, but it is one that has been made by patients and their friends, who in making it have unjustly condemned the whole class.

One of our great surgeons once made the remark that when he was sick he wished his physician to do something more than merely to look at his tongue and feel of his pulse; that at such a time he wanted a little sympathy; the man desired some attention as well as the body.

Besides all the science and skill of the modern day, there is still something more needed by the physician who would be acceptable to his patients, particularly those who have been carefully reared. He needs something of refinement and tenderness and culture; for besides dealing with a diseased lung or an

injured limb as a problem involving mere science and skill, he is also dealing at the same time with a human entity of delicate nerves and acute feelings, yearning for a bit of sympathy. He is bound to recognize the psychic as well as the physical needs of his patients. So it is to a lesser degree with regard to the nurse; her patient expects something more of her in the way of refinement and tenderness than she does of her cook or her chambermaid, and yet I know of a case not long ago where the trained nurse when off duty affiliated with the kitchen girl. Moreover there is often a kind of roughness and disagreeable abruptness in the trained nurse which I suspect is in part due to the hospital life and the constant having to do with the kind of patients one generally finds there, as well as the large number of them they are obliged to attend. A criticism, which by the way, can be made sometimes against the young physician just out of his service in the hospital. In this respect the hospital training is bad, and both doctor and nurse may unconsciously form the vicious habit.

If the criticisms I have made are just ones, is the defect in the training or in the class of young women who enter the training schools? I believe in both. If the position and standing of the nurse in the future is to approach that of the physician, as a doctor of large practice, and who has much to do with nurses, declared to me not so long ago, then the class of women who take up the vocation must be higher to begin with, possess more refinement and culture, be gentlewomen. As an illustration I would mention the Children's Hospital, the nursing in which is conducted by the Sisters of St. Margaret, all of whom are ladies of refinement as well as most devoted and skilled nurses; hardly has one entered the institution before he somehow experiences an indescribable influence of gentleness and refinement. The hospital training schools of to-day, it seems to me, are not altogether suited or suitable for women of this kind. Too much mere drudgery work is still required, although changes for the better have been made in this direction. For example, after one has well learned the making of a bed it is of no especial profit, that I can see, to make a dozen or more every morning; the time might much better be used in study or in administering a bit of sympathy to a poor sufferer. As it is now, the primary question asked those who intend entering the training school is, Are you very strong and capable of enduring the hardest work? This in itself shuts out often those who are strong enough for the legitimate offices of a nurse, and who may be best fitted for them. I take it that this is not so much the fault of the management of the training schools as due to a lack of means, which compels, for economy's sake, the combining of the two departments, the chamber work of the hospital, if I may so denominate it, and the legitimate nurse's work.

The training school of the future, it seems to me, will have its own proper building and teachers, and require only such duties in the hospital as are peculiar to the nurse; and in addition to the studies now pursued there shall be more emphasis laid upon the humanities of the profession. Tenderness, gentleness, delicacy of step and touch should be insisted upon as much as the ability to take the temperature correctly or give a subcutaneous injection.

Very truly yours, EDWARD O. OTIS, M. D.
Boston, October, 1883.

A NOTE FROM DR. KNAPP.

NEW YORK, October 21, 1883.

MR. EDITOR,—If I had thought that the remarks in my introductory address which you incriminate in your issue October 18th with so much spirit as justice might by anybody be taken for more than a campaign anecdote, I would certainly not have connected my name with them. But as this seems to have been the case I consider it my duty to offer you and all whom it may concern my sincere apologies. Seriously speaking, my words to a Boston physician on Boston doctors, ought not to have been said, for the following reasons:

(1.) They violate the rule of propriety which forbids making one's self the hero of one's own story.

(2.) They are unjust to the city of Boston, which is large and wealthy enough to reward skilled labor of every description. Its inhabitants are deservedly famous for the liberality with which they patronize all kinds of public institutions.

(3.) They are unjust to the physicians—in particular the oculists—of Boston, whose high reputation I heartily indorse, well aware that not only in this country, but in all, the best work in the science and art of medicine has often enough been done outside the metropolis.

If you think, Mr. Editor, the above lines worthy of a corner in your journal you will, by inserting them, oblige yours respectfully, H. KNAPP, M. D.

Miscellany.

DR. SAMUEL EATON FITZ. OBITUARY.

DR. SAMUEL EATON FITZ, of Roxbury, Mass., died on the 20th ult. He was born in Boston January 26, 1836. During the years from 1852 to 1855 he was clerk in the lumber and coal business. He afterwards prepared for college in the Chelsea High School, and in due time entered Harvard College, graduating in the class of 1882. In September of the same year he entered the Theological Seminary at Newton, Mass. During the war he served a considerable time in the United States Christian Commission; for three months in 1863 with the Army of the Potomac, and again with the Army of the James from May, 1864, to the close of the war. He then became agent for the Commission at Richmond, Va., for a time. He returned to his studies in the Theological School and completed them in 1866, but was never ordained. From September, 1867, to May, 1874, he was principal of public schools in Winchester and Worcester, Mass. He began the study of medicine at the Harvard Medical School in September, 1874, and took his degree in June, 1878. He served as surgical externe and house physician at the Boston City Hospital for eighteen months, ending July, 1878. Since this time he has been engaged in the practice of medicine in Roxbury. He had suffered for some years from valvular disease of the heart, and within the last few months renal symptoms had added themselves. He died from uræmic convulsions. He was never married.

Dr. Fitz was a man of singularly modest and unassuming character. But the few who knew him intimately found behind his quiet and retiring manner a kindly disposition and a well-stored mind.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 20, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	524	177	19.38	18.62	4.75	3.42	5.32
Philadelphia.....	846,984	338	112	18.85	4.35	2.08	4.35	3.75
Brooklyn.....	566,689	238	83	19.32	18.48	6.30	1.68	5.46
Chicago.....	503,304	175	88	27.86	3.92	5.70	3.92	10.76
Boston.....	362,535	186	68	21.06	17.82	5.94	3.24	7.56
St. Louis.....	350,522	166	71	31.80	16.20	4.20	1.80	16.80
Baltimore.....	332,190	153	59	35.75	20.15	7.15	2.60	14.95
Cincinnati.....	255,708	96	35	13.55	11.46	—	3.13	5.21
New Orleans.....	216,140	114	43	16.72	13.20	3.52	.88	.88
District of Columbia.....	177,638	66	20	4.56	13.65	—	—	1.52
Pittsburg..... (1883)	175,000	51	14	19.61	17.69	5.88	3.92	7.84
Buffalo.....	155,137	58	18	27.52	6.88	13.76	3.44	1.72
Milwaukee.....	115,678	24	15	16.64	8.32	—	—	12.48
Providence..... (1883)	116,755	40	8	17.50	22.50	2.50	10.00	2.50
New Haven..... (1883)	73,000	24	10	24.96	4.16	—	8.32	—
Charleston.....	49,999	43	15	18.64	11.65	—	2.33	—
Nashville.....	43,461	15	4	6.66	13.33	—	6.66	—
Lowell.....	59,485	25	8	12.00	20.00	—	4.00	—
Worcester.....	58,295	17	7	23.52	5.88	11.76	—	11.76
Cambridge.....	52,740	16	6	25.00	6.25	6.25	—	18.75
Fall River.....	49,006	18	10	55.55	11.11	22.22	11.11	16.66
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	10	—	—	30.00	—	—	—
Springfield.....	33,340	9	3	22.22	11.11	11.11	11.11	—
Salem.....	27,598	—	—	—	—	—	—	—
New Bedford.....	26,875	14	3	7.14	14.28	7.14	—	—
Somerville.....	24,985	8	1	25.00	50.00	—	12.50	—
Holyoke.....	21,851	9	5	—	11.11	—	—	—
Chelsea.....	21,785	7	1	14.28	42.48	—	—	14.28
Taunton.....	21,213	5	1	—	20.00	—	—	—
Gloucester.....	19,329	5	2	—	40.00	—	—	—
Haverhill.....	18,475	7	3	28.56	28.56	—	—	14.28
Newton.....	16,995	6	0	—	16.66	—	—	—
Brockton.....	13,608	9	0	44.44	11.11	11.11	22.22	11.11
Newburyport.....	13,537	2	2	—	—	—	—	—
Fitchburg.....	12,405	2	0	—	—	—	—	—
Malden.....	12,017	5	1	—	—	—	—	—
Nineteen Massachusetts towns.....	140,149	47	12	—	—	—	—	—

Deaths reported 2535: under five years of age, 905; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 524, consumption 360, lung diseases 206, diphtheria and croup 176, diarrhoeal diseases 112, typhoid fever 79, scarlet fever 52, malarial fevers 47, whooping-cough 19, erysipelas 11, cerebro-spinal meningitis nine, measles eight, small-pox six, puerperal fever five. From scarlet fever, New York and Philadelphia 10 each, Boston seven, Chicago eight, St. Louis four, Baltimore, Buffalo, and New Haven three each, Brooklyn two, Cincinnati, Providence, and Lowell one each. From malarial fevers, New York 13, Brooklyn eight, St. Louis and New Orleans seven each, Baltimore five, Charleston three, Philadelphia two, Chicago and New Haven one each. From whooping-cough, New York four, Brooklyn three, Baltimore and New Orleans two each, Chicago, Boston, St. Louis, District of Columbia, Pittsburg, Milwaukee, Charleston, and Somerville one each. From erysipelas, Baltimore four, Philadelphia and Cincinnati two each, Brooklyn, New Orleans, and Charleston one each. From cerebro-spinal meningitis, Chicago and Baltimore two each, Philadelphia, Cincinnati, Buffalo, Lowell, and Haverhill one each. From measles, New York three, St. Louis two, Philadelphia, Baltimore, and District of Columbia one each. From small-pox, New Orleans three, Philadelphia two, St. Louis one. From puerperal fever, New York, Chicago, Cincinnati, Buffalo, and Fall River one each.

Six cases of small-pox were reported in St. Louis; scarlet fever 55, typhoid fever 43, and diphtheria 31 in Boston; scarlet fever 17, diphtheria three in Milwaukee.

In 36 cities and towns of Massachusetts, with an estimated population of 1,067,463 (estimated population of the State

1,922,530), the total death-rate for the week was 19.34 against 18.53 and 20.08 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending October 6th, the death-rate was 18.5. Deaths reported 3054: diarrhoea 207, acute diseases of the respiratory organs (London) 191, scarlet fever 114, fever 57, measles 37, whooping-cough 31, diphtheria 26, small-pox (Birmingham six, London three, Sunderland one) 10. The death-rates ranged from 12.3 in Huddersfield to 28.6 in Newcastle-on-Tyne; Bristol 14; Leicester 14.9; Birkenhead 15.9; London 16.5; Sheffield 18.9; Nottingham 19.4; Leeds 19.8; Birmingham 20.5; Liverpool 23.5. In Edinburgh 14.8; Glasgow 18.3; Dublin 23.4.

For the week ending September 29th, in 166 German cities and towns, with an estimated population of 8,598,787, the death-rate was 23.6. Deaths reported 3903; under five years of age, 2037; consumption 480, diarrhoeal diseases 277, lung diseases 255, diphtheria and croup 203, scarlet fever 124, whooping-cough 61, typhoid fever 85, measles and röteln 36, puerperal fever 17. The death-rates ranged from 8.1 in Darmstadt to 37.8 in Königsberg; Breslau 29.5; Munich 26.2; Dresden 24; Berlin 27; Leipzig 25.6; Hamburg 23.3; Cologne 26; Frankfurt a. M. 9.1; Strasburg 19.6.

For the week ending October 6th, in the Swiss towns, there were 26 deaths from diarrhoeal diseases, consumption 20, lung diseases 10, diphtheria and croup three, whooping-cough three, measles one, erysipelas one. The death-rates were, at Geneva 7.1; Zurich 10; Basle 18.3; Berne 16.9.

The meteorological record for the week ending October 20th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps:—

Date.	Barom-eter.		Thermome-ter.			Relative Humidity.				Direction of Wind.			Velocity Wind.			State of Weather. ¹			Rainfall.	
	Oct., 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	9.23 P. M.	11.23 P. M.	7.23 A. M.	9.23 P. M.	11.23 P. M.	7.23 P. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 14	29.903	68	79	54	93	74	74	80	SW	W	NW	12	16	12	T	L	F	—	—	
Mon., 15	30.381	43	56	38	73	58	61	64	NW	NW	NE	17	8	12	C	F	C	—	—	
Tues., 16	30.618	37	44	30	68	47	69	61	NW	E	W	15	11	7	C	C	C	—	—	
Wed., 17	30.640	39	46	30	60	41	72	58	N	NE	S	13	15	2	C	C	C	—	—	
Thurs., 18	30.546	43	51	31	69	51	76	65	W	SE	S	6	16	5	C	C	O	—	—	
Fri., 19	30.297	56	62	44	80	72	86	79	SW	SW	S	5	11	8	O	O	O	—	—	
Sat., 20	30.139	55	62	45	93	100	100	98	SW	NW	N	6	4	15	R	T	R	—	—	
Mean, the Week.	30.361	49	79	30				72											13.00	1.08

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 19, 1883, TO OCTOBER 26, 1883.

BACHE, DALLAS, major and surgeon. Assigned to duty at Willet's Point, New York. Paragraph 1, S. O. 238, A. G. O., October 18, 1883.

HORTON, S. M., major and surgeon. Leave of absence for one month, with permission to apply for an extension of three months. Paragraph 6, S. O. 216, Department of the Missouri, October 20, 1883.

BARNETT, RICHARDS, captain and assistant surgeon. Assigned to duty at Columbus Barracks, Columbus, Ohio. Paragraph 1, S. O. 240, A. G. O. October 20, 1883.

MAUS, LOUIS M., captain and assistant surgeon. Assigned to duty at Fort A. Lincoln, D. T. Paragraph 4, S. O. 180, Department of Dakota, October 15, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING OCTOBER 27, 1883.

VAN REYKEN, W. K., surgeon, detached from the Naval Hospital, New York, and ordered to the U. S. S. Powhatan.

WELLS, H. M., surgeon, detached from the Naval Laboratory, New York, and ordered to the Naval Hospital, New York.

Medical Inspector A. C. GORGAS's orders modified so that he will be detached from the Naval Hospital, Chelsea, Mass., on December 10th instead of November 10th.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, JULY 1, 1883, TO SEPTEMBER 30, 1883.

BAILHACHE, P. H., surgeon. Detailed as member of Board to examine candidates for promotion. August 23, 1883.

Detailed as surgeon in charge, Cape Charles Quarantine Station. September 5, 1883.

MILLER, T. W., surgeon. Granted leave of absence for twenty-five days. August 31, 1883.

WYMAN, WALTER, surgeon. Detailed as member of Board to examine candidates for promotion. August 23, 1883.

LONG, W. H., surgeon. Granted leave of absence for twenty days. September 25, 1883.

SMITH, HENRY, surgeon. Directed to take charge of quarantine service at the Cape. July 29, 1883.

SPONER, G. W., passed assistant surgeon. Granted leave of absence for thirty days. August 24, 1883.

To inspect the relief stations along the coast of Maine. September 29, 1883.

GOLDSBOROUGH, C. B., passed assistant surgeon. Granted leave of absence for thirty days. August 29, 1883.

BANKS, C. E., assistant surgeon. Relieved from duty at Portland, Oregon, and to report to the Surgeon-General at Washington. July 10, 1883.

CARMICHAEL, D. A., assistant surgeon. Granted leave of absence for ten days. August 31, 1883.

PECKHAM, C. T., assistant surgeon. To proceed to Portland, Maine, for temporary duty. August 25, 1883.

DEVAN, S. C., assistant surgeon. To proceed to Portland, Oregon, and assume charge of the service. September 11, 1883.

KALLOCH, P. C., assistant surgeon. To proceed to Philadelphia, Penn., for temporary duty. July 25, 1883.

To rejoin his station, New York. July 31, 1883.

YEMANS, H. W., assistant surgeon. Relieved from duty at Sitka, Alaska, and to proceed to Portland, Oregon, for temporary duty. July 10, 1883.

To proceed to San Francisco, Cal., reporting for duty to Surgeon Vansant. September 11, 1883.

GLENNAN, A. H., assistant surgeon. To remain at Norfolk, Va., until further orders. July 29, 1883.

WASDIN, EUGENE, assistant surgeon. To proceed to New Orleans, La., for temporary duty. August 2, 1883.

To proceed to Mobile, Ala., for temporary duty. August 27, 1883.

To rejoin his station (New Orleans) as soon as practicable. September 25, 1883.

PROMOTIONS.

GUITÉRAS, JOHN, passed assistant surgeon. Promoted, and appointed passed assistant surgeon by the Secretary of the Treasury from September 1, 1883. August 31, 1883.

WHEELER, W. A., passed assistant surgeon. Promoted, and appointed passed assistant surgeon by the Secretary of the Treasury from September 1, 1883. August 31, 1883.

RESIGNATION.

O'CONNOR, F. J., assistant surgeon. Resignation accepted by the Secretary of the Treasury, to take effect August 1, 1883. August 2, 1883.

APPOINTMENT.

WASDIN, EUGENE, M. D., of South Carolina, having passed the examination required by the regulations, was appointed an assistant surgeon by the Secretary of the Treasury, August 2, 1883.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held at the Medical Library Rooms, 19 Boylston Place, on the second Thursday of November, at four o'clock p. m. A. P. Weeks, M. D., will read a paper upon Acute Inversion of the Uterus. Lunch served at close of session. HENRY M. FIELD, M. D., Secretary.

ERRATUM. — In the article in the JOURNAL of October 25th, by Drs. Tilden and Watson, at page 385, in the first nine cases of the second table, recording the cessation of the gleet after operation, read *weeks* instead of *months*.

BOOKS AND PAMPHLETS RECEIVED. — Wood's Library of Standard Medical Authors. A Manual of Practical Hygiene. By Edmund A. Parkes, M. D., F. R. S. Edited by F. S. B. Francois de Chaumont, M. D., F. R. S. Sixth Edition. With an Appendix giving the American Practice in Matters relating to Hygiene, by Frederick N. Owen, Civil and Sanitary Engineer. Vol. I. New York: William Wood & Co. 1883.

Original Article.

A STRANGE CASE.¹

BY O. T. HOWE, M. D., MEDICAL EXAMINER.

ON the evening of February 28th, a few minutes past nine, I was told that Charles Cate had shot himself in a room over the Pemberton Bank, in Lawrence, Mass. I immediately went there, and on entering the room found Cate lying on his back on the floor. He was still alive, but his pulse was feeble, and his respiration stertorous. I loosened his clothes, moved him into an easier position, and then examined his wounds. Prepossessed with the idea that he had shot himself, I made but a slight examination. I saw what I supposed to be the wounds of entrance and exit, the cuts on the scalp from the pistol butt, and concluded that a post mortem on the next day, for the man was evidently dying, would reveal the exact course of the bullet. The occupant of this room, Mrs. Anderson, was lying on her bed, disabled by injuries presently to be described.

I then turned to examine the room, the plan of which I have here. It was a large room, in the third story of the Pemberton Bank Building, with two windows looking out on Pemberton Street. The door leading into the entry was fitted with ground-glass panels, and had a spring lock. To the right of the door of entrance was a lounge. On the lounge, which was spattered with blood, Cate's overcoat was lying. On the wall above the lounge, about four feet from the floor, was a smear of blood about the size of a man's hand. The ceiling above the lounge was spattered with blood, as was also the door leading into Mr. Osgood's room, a few feet distant. The carpet where Cate was lying was soaked with blood, which flowed freely from his head. To the left of the door as you entered was a large closet. Near the entrance to the closet was a pail half full of dirty water, a pair of shoes and stockings, and a hop-bag. The floor was covered with blood, and blood was spattered over the door, and over a chest of drawers which stood in the closet. The second drawer in this was partly drawn out, and through its side was a bullet hole. In the drawer was found a bullet which fitted the revolver. The other bullet was not discovered at this time. The revolver which had been taken from Cate was an old-fashioned 44 calibre Remington. Two barrels had been discharged, four remained loaded. It was covered with blood, and about the trigger several hairs could be detected. The chamber to the revolver, as I was informed by the officers, had been found lying on the bed.

To the left of the closet was a door leading into Mr. Coan's room. This door was found bolted on Mrs. Anderson's side. There were no marks of blood about the wood-work. Mrs. Anderson had been moved from the closet to the bed. I next examined her wounds. There were one or more severe contused wounds of the scalp, and a bullet wound in the right leg. The ball had entered near the head of the tibia, and passed out about half way down the calf of the leg.

At twenty-seven minutes past nine, or about forty minutes after the shooting, Cate died. I then took possession of his effects. The only things of importance to this paper was a handful of caps in his vest pocket, which fitted the pistol. As I was search-

ing him his nephew, Herbert Cate, told me that I should find a paper sewed in his vest lining which might be of importance. I ripped the vest and took out a sealed envelope, the contents of which proved to be some twenty grains of sulphate of morphia. The body was then given up to the undertaker. A closer examination of the closet the next morning disclosed the other bullet and an indentation in the wall where it had struck. On the wall were some fragments of woolen corresponding with Mrs. Anderson's skirt.

The autopsy was held the next day, seventeen and a half hours after death, Drs. Sargent, Dow, and Abbott assisting. The following is a condensed account of it:—

Rigor mortis well marked. The body was that of a strongly built, well developed man, about five feet nine inches in height, weighing about 165 pounds. The face was pale; eyes closed; pupils slightly dilated. The hair was matted with blood. On the right cheek, a little below and to the right of the eye, were two or three small ecchymoses. Above and to the right of the right eyebrow there was a shallow cut about half an inch long. On the right temple were two cuts about the same size and depth, and a triangular cut an inch long on one arm, and half an inch on the other. Two inches above the right ear was a lacerated wound about two inches long by one broad, laying bare the skull. On the vertex were nine distinct cuts, each about three fourths of an inch long, slightly convex towards the face. These cuts were all separated from each other, covering a space of two and three fourths inches in length by two in breadth. Directly back of these cuts the skull was exposed for a space of three inches in length by two in breadth, the edges of the wound being much lacerated.

On removing the skull-cap the dura mater was rather easily detached; the pia mater reddened and injected. The vessels on the surface of the brain were full of dark fluid blood. On removing the brain nearly a pint of dark fluid blood and serum escaped from the severed vessels. There was no fracture of the skull, and no extravasation of blood on the surface of the brain or into its substance. The brain was large and apparently healthy. Cut sections were made without noting anything abnormal.

Examination of the Thorax. The pericardium contained half an ounce of serous fluid. The right ventricle of the heart contained nearly a fluid drachm of dark, partly fluid, blood. The left ventricle contained somewhat less. The structure of the heart was healthy; its valves were normal. The left lung was somewhat darker than the right, and contained more blood. Both lungs were normal in consistency.

The stomach contained over a pint of gruel-like fluid, yellow in color, and consisting of partly digested food, which gave off a somewhat sour smell. The mucous membrane was slightly injected. No evidence of disease or poisoning was observed.

All the other organs of the body were examined, and nothing sufficiently abnormal to have had any effect on the case was found. The anus was closed, and there was no sign of fecal matter about it.

The opinion of the medical examiner and of the physicians present was that the man died from self-inflicted wounds, the direct cause of death being shock or concussion.

The only question I had to decide as medical examiner was the possibility or impossibility of the wounds being suicidal. Taken *per se* it was, of course, more

¹ Read before the Massachusetts Medico Legal Society at the annual meeting, June 12, 1883.

probable that they were homicidal, but the evidence was very strong against it. I will now proceed to consider the evidence on which the above opinion was founded, and I will begin with Mrs. Anderson's testimony, given as soon as she recovered sufficiently to speak:—

"On the evening of February 28th I left my store at about seven o'clock with a sick headache, to which I am subject. I went directly to my room, and got a bucket of water, and made a hop-bag. I was soaking my feet, with the hop-bag on my head, when some one rapped at the door. I said, 'Is that you, Will?' (meaning my brother); Cate then spoke, and I knew his voice. I told him to go away, but he forced the door open, and said, 'Why did n't you open the door?' I said, 'I don't want you here; go away.' Then he pulled the hop-bag off my head, and struck me with something, I don't know what. I screamed, and ran into the closet, and he fired at me twice. I pulled the door to, and then I heard what I thought was the click of the pistol once or twice; then in a moment or two I looked out, and saw Cate pounding himself on the head with the pistol. Then I suppose I fainted."

This was Mrs. Anderson's testimony, which I am inclined to believe was the truth, but not the whole truth. Before showing how far it was corroborated it will be necessary to introduce the other witnesses.

As I have already stated, a door opened from Mrs. Anderson's room into Mr. Osgood's. In his room that evening were Mr. and Mrs. Osgood, and a Mr. Fisk. On the other side was Mr. Coan's room, but this was unoccupied between the hours of seven and twenty minutes past nine. Both of these doors had shrunk, allowing sounds to pass through readily. On the floor above Mrs. Anderson's room there were a number of persons present that evening, Helen Claystone and her mother, Letty Savage, Mr. Worswick, Mr. Robinson, and some others. The other witnesses were the officers and parties on the street.

Mr. and Mrs. Osgood and Mr. Fisk gave testimony to this effect:—

About fifteen minutes after seven they heard Mrs. Anderson go into her room, and light her lamp. In a short time she came out, and went into the kitchen, which opens out of their room, and is used by all on the floor; she drew a bucket of water, and went back to her room. They heard nothing more until the rap on the door. They would naturally have heard any talking or unusual noise in Mrs. Anderson's room. About half-past eight Mr. Osgood came out of his room, and went up stairs. He then saw Cate standing in front of Mrs. Anderson's door. He stayed up stairs a few moments, and when he returned Cate was still there. He went into his room, and immediately after a rap was heard on Mrs. Anderson's door. A woman's voice replied, and then the door was forced open. Voices were heard for a moment, then a blow and scream, then two pistol shots. Mrs. Osgood threw up the window, and called "Police!" Then sounds were heard which seemed like clicks or blows (the evidence as to this varied), then louder sounds like blows, then all was silent.

In a time long enough to run down a flight of stairs, Mr. Robinson appeared on the scene. He was immediately followed by Miss Claystone and Mr. Worswick. Mr. Robinson tried the door, it was locked; through the ground glass of the panel he saw a shadow cross the room towards the lounge, and the light went out. This was also witnessed by Mr. Colcord, who was just coming

up the stairs, and by Miss Claystone in the entry. To Mr. Colcord it seemed as if the shadow was waving its hands. Mr. Worswick then ran down stairs for the officers, and the other three remained, watching the door. Within a time, variously estimated from two to ten minutes, but which careful sifting of the evidence brings down to not more than three or four minutes, three officers and Messrs. Trickey and Sweeny appeared on the scene. The officers burst open the door, and Cate was seen sitting on the lounge, with the revolver in his hand. As they entered Cate rose up, and was disarmed by the officers. He then fell back insensible. While this was taking place Mr. Sweeny stood in the doorway so that no one could pass out; the room was dimly lighted from the hall and street lights. A lamp was soon brought, and a careful examination of the room made. Cate, his head and hands covered with blood, was laid on the floor. Mrs. Anderson was lifted from the closet floor where she was sitting, and placed upon the bed. No third party, or any trace of a third party, was found in the room. The door leading into Coan's room was found bolted on Mrs. Anderson's side, Mrs. Osgood's door was also found locked. Mrs. Anderson then gave her testimony to the officers. The two bullets were both found, confirming her story that both shots were fired at her. The wounds on her head and on his might both have been given by blows from a revolver such as Cate held in his hand. The bucket of water, the shoes and stockings, the hop-bag; these were all silent witnesses to the truth of her story. The sound of blows, the click of the pistol as it missed fire, these were all confirmed by other parties.

From the time of the pistol shot, then, the door leading into the entry was watched; no one went out; three or four minutes passed and the officers broke in; no one went out, the room was searched, no third party was there. If any other person was concerned in the tragedy, he must have clubbed Cate fourteen or fifteen times after Cate had shot the woman; and these blows must have been given apparently without resistance on the part of Cate, who was a strong, powerful man, armed with a revolver. In some mysterious way, after the assault, the assassin had vanished.

Mrs. Anderson's room was in the third story, with the windows looking out on Pemberton Street. Mrs. Carlisle, who roomed across the street, at the sound of the pistol shot went to her window and remained watching Mrs. Anderson's room until the lights were brought. It was impossible for any one to have escaped that way. A door opened into Mrs. Osgood's room. But in the room were three parties, and between the door and doorpost paper had been packed to dull the sound; this was undisturbed.

A door opened into Mr. Coan's room, but he could swear that on that evening he left the door locked on his side with the key in the lock, and found it so on his return. The door leading from his room into the entry was also locked, and the key in his pocket. The officers also testified that the door was found bolted on Mrs. Anderson's side. It was of course impossible that any one could have let himself out through this door and then locked it on both sides. Mr. Robinson was the first person on the scene, and he had a key to the room; but we have the testimony of Miss Claystone and Mr. Worswick, that Mr. Robinson ran down the stairs just in front of them, and that certain of the occurrences in the room took place while they were all three watching.

So with any other party; the time was so short, and so many witnesses were around the door, that it would seem impossible for any one to have given Cate the injury and then escaped. The only way a person could have left the room by any human means was through Coan's room; and here the evidence, as I have stated, was very clear.

Mrs. Anderson's testimony, then, seems to be corroborated by both direct and circumstantial evidence. It would certainly be unnatural for a woman to entertain a gentleman in her room while engaged in washing her feet, as she evidently was. It would be impossible that she should invent a story as soon as she recovered from her faint which would bear the test of investigation, she at the time not being sure but what Cate might survive.

There is one point, however, where her story, to say the least, was incomplete; the night of the tragedy there was a masquerade ball in a hall not far from her room. As afterwards appeared, she had promised a young gentleman to go and dress him for the ball that evening. She did go, and, as he testifies, was in his room from a quarter before eight to a quarter past eight. This she does not allude to in her evidence. She must have gone to her room about fifteen minutes past seven, stayed there for half an hour or so, and then gone over to the hall, and returned about twenty minutes after eight. This circumstance, however, serves to give a possibly immediate motive for the attempted murder.

Cate was very jealous of Mrs. Anderson. That evening he was seen by Mr. Robinson between seven and eight o'clock to enter the Pemberton Bank Building and go up stairs. In about five minutes he came down and went away. It is very possible that he watched her, and saw that she went to the masquerade, and that this was the spark that lighted the conflagration. I would say here, that there was not the slightest reason to suspect Mrs. Anderson and the young man of any intrigue, and it was easily proved that at the time of the shooting he was in Saunders' Hall. Once before Cate had quarreled with Mrs. Anderson, and he had been put under bonds to keep the peace. At that time he had taken this same Remington revolver to Mr. Frost, a gunsmith, and had it put in repair. It was identified by Mr. Frost at the inquest.

Cate's friends for some time had had doubts of his sanity. A week before the tragedy his nephew, Herbert Cate, warned him to keep away from Mrs. Anderson, or he would again be arrested. "Don't you fret," was his answer, "I shall never be taken alive;" and then he pointed out to him the package sewed in his vest, but without explaining what it was.

He was, then, a desperate, very probably insane man, wild at Mrs. Anderson's evident desire to get rid of him. I believe that, jealous on account of her visit to the masquerade, he returned to his room, got his pistol, and came back intending to kill Mrs. Anderson and then to commit suicide.

The whole story of the crime seems to point to insanity. He struck her over the head with a loaded pistol. He fired at her twice and missed with one barrel, although the weapon was used not more than three or four feet away. My theory is that he then tried to shoot himself, and that for some reason the pistol did not go off; that he then took out the chamber to see what the trouble was, and, hearing the door tried, in his confusion threw the chamber on the bed, walked across to the other side of the room, blew out the light,

and then began striking himself on the head. The morphia in his vest he evidently meant as a last resort, should he be taken to the station house.

There are several circumstances connected with this case of a very mysterious nature. For example, why did not Cate shoot himself instead of pounding himself on the head? Why was the chamber out of the revolver? Why was the light out? Why did not Mrs. Anderson tell of going to the masquerade? These points I have indicated and tried to answer. Mr. Frost, the gunsmith, tested the revolver and had no difficulty in firing it; he also testified that the chamber must have been taken out and could not have fallen out; it was possible, he said, however, that it might have been jammed and had not revolved that night.

I now come to the more strictly medico-legal points of the paper:—

(1.) Did Cate die of the wounds received on the head, or were they only factors in a result due also to poison or existing disease? A thorough examination was made of the body, and no indication of disease or poison was found. That he had taken no irritant or specific irritant poison was evident. There was no pin-hole contraction of the pupil, no vomiting, no diarrhoea, no convulsions. No bottle or paper containing poison, or likely to have contained poison, was found on or about his person, except the package of morphia which was sewed in his vest. I believe he died of the wounds received, and of them alone.

(2.) What was the immediate cause of death? The autopsy revealed no extensive extravasation of blood on the surface or into the substance of the brain; there was no fracture of the skull; beyond congestion of the vessels of the brain there was almost nothing to show cause of death.

Taylor says:¹ "Wounds of the head are dangerous in proportion as they affect the brain, and it is rare that a severe contused wound is unaccompanied by some injury to this organism. It is important to remember that neither compression nor physical injury to the brain is necessary to render concussion fatal; after death no particular morbid change may be discovered in the body." And again:² "Death may take place from the disturbance of the function of any organ important to life without this being necessarily accompanied by a perceptible alteration of structure." The history of the case and the result of the autopsy establish to my satisfaction the fact that Cate died of shock or concussion. No one of the wounds apparently was severe enough to have caused immediate insensibility, yet taken together they produced the effect of one crushing blow. "It is a well-known medical fact," here I quote again from Taylor, "that a number of injuries, each comparatively slight, are as capable of operating fatally as any single wound."

(3.) Could a man who had received fatal injuries on the head, of the character described, possess the power of locomotion, or would they necessarily be accompanied by immediate insensibility? Taylor says³ that a man after a severe compound fracture of the skull may nevertheless be able to walk for some distance and then fall dead; that severe injury to the head or great effusion of blood is not necessarily accompanied by immediate insensibility or loss of motion. So, also, Woodman and Tidy, in their work on Fo-

¹ Medical Jurisprudence, page 341.

² Ibid., page 316.

³ Ibid., page 347.

rensic Medicine, state that the symptoms of shock are usually immediate, but there may be an interval between the accident and the symptoms. In this case we may perhaps assume that the lighter blows were first delivered, and that only as the officers came up stairs and the increasing probability that he would be taken alive was forced upon him did he deliver the heavier and more fatal blows.

I think, then, we may say that while it would be more natural to expect immediate insensibility, it is not impossible that the power of locomotion may remain for a brief period, and yet the patient die of shock.

(4.) Could the wounds on the head have been self-inflicted? The announcement of the result of the autopsy, that Cate had committed suicide, was received with considerable incredulity not only by the laity but also by some of the profession. Leaving out the evidence, however, there were some things in the character of the injuries themselves that looked like suicide. That the wounds were all either on, or to the right of, the median line, looks as if they were given chiefly with the right hand of the person himself. The nine convex cuts, all crowded into a comparatively small place, show that the head must have been kept quiet while the blows were delivered. In any personal conflict it would be almost impossible that nine wounds should be received in a space of two square inches unless we assume that the receiver was insensible. Moreover, these wounds were all shallow, evidently given with feeble force, characteristic of suicidal rather than homicidal violence. "Contused wounds," says Taylor, "are rarely seen in cases of suicide, but there are exceptions to this remark. When persons laboring under insanity commit suicide they often inflict upon themselves wounds of an extraordinary kind, such as would at first view lead to the suspicion that they had been produced by the hand of a murderer. In one instance which is reported, a lunatic in committing suicide inflicted thirty wounds on the head." I think we can say, then, that it was perfectly possible that the wounds were self-inflicted, and yet in the death and in the whole story there remains sufficient mystery to make it what I have styled my paper, *A Strange Case*.

A CASE OF TWO-HORNED UTERUS (UTERUS BICORNIS),

THE LEFT HORN NOT COMMUNICATING WITH THE VAGINA AND DISTENDED BY MENSTRUAL BLOOD, FORMING A LARGE TUMOR. SUPRA-VAGINAL REMOVAL OF UTERUS, OVARIES, AND FALLOPIAN TUBES. CURE.¹

BY JOHN HOMANS, M. D., BOSTON,
Surgeon to the Massachusetts General Hospital.

Miss L. S., a farmer's daughter in Vermont, eighteen years old, was sent to me in April, 1883, by Dr. Ellis, of Poultney, Vt. She was a healthy girl, but had a worn look as if she had suffered much from pain. The girth at the umbilical level was thirty and a half inches, and there was a globular tumor with thick walls filling the lower middle part of the abdomen and pelvis. The tumor was movable, it had no adhesions; fluctuation and impulse were both distinct. Tenderness of the abdomen was universal. The dullness extended an inch above the umbilicus. On auscultation no sounds were transmitted through the tumor. The right lumbar re-

gion was resonant, the left was dull. The uterus could not be found. The vagina was filled with a tightly distended elastic tumor which pushed the rectum forcibly backwards. Menstruation had begun at fourteen years of age. It had been irregular and deficient. Her appetite was poor and also her sleep. Her pulse was 100. She had dull pain in the pubic region, and suffered almost constantly from pain and tenderness. Formerly her left leg was swollen, but is now normal in size. One year ago she noticed that she was increasing in size, and the tumor has risen up and spread out. She thinks that there has been some periodical increase and diminution in the tumor. This somewhat detached account of the case does not make sufficiently prominent the principal factor, and the one that induced me to operate, namely, the agonizing pain. The patient said she was willing to die of any operation that promised the least hope of amelioration. On April 11, 1883, I operated at the Carney Hospital. I made an incision from the umbilicus to the pubes, and on cutting through the parietes the marks of an old hæmorrhage (hæmatocele) were met with in the cellular tissue of the pubic region. On getting through this confusing mass of old blood clot and muscular tissue the peritonæum was opened. The tumor was found to have an adhesion to the omentum and to be semiglobular in shape, and to be incorporated with the floor of the pelvis, the rectum, and the bladder, and, in short, to be the uterus filled with fluid and distended to about the size of a small foot-ball or a large cocoanut. The right ovary and Fallopian tube were tied and burnt off. The left ovary was tied, and it was found that a mass of irregular sausage-shape was connected with the left broad ligament and Fallopian tube. This mass puzzled me at first, and I could not tell whether it was intestine or tube, or a mass of hæmatocele, or an old aneurism. The anterior and lower pelvic region were more or less filled with shreddy remains of old hæmatoceles. The globular swelling was now punctured, and the cavity of the uterus emptied. Its wall, at the seat of puncture, was an inch or more in thickness. Several pounds of dark fluid blood without clots ran out and welled out. The cut surfaces of the uterus bled pretty freely and were clamped. The uterus immediately began to contract in size, and was much smaller at the close of the operation than when the abdomen was opened. It seemed impossible to remove the whole uterus, as its lower pelvic portions could not be raised. A wire was passed around the uterus just above the bladder and as low as possible, but it broke. One of Mr. Wells' large ovariectomy clamps was then put on, and a large portion of the uterus and the left Fallopian tube and ovary were removed. An elastic catheter was passed into the cavity of the uterus (between the jaws of the clamp). The operation was done under the carbolic spray, and the wound was dressed antiseptically. It seemed at first as if the os uteri might have been found and the uterus drained through it, but the cavity I opened did not communicate with the vagina, and from the state of the pelvic organs it seemed to me that menstruation would go on, and perhaps the same state of things would be reëstablished as existed before the operation, or even a more serious one, for it would have been difficult to have kept the artificial cervix open, and there was a large wound in the roof of the uterus through which blood was constantly oozing; consequently I decided to remove all of the

¹ Read before the Boston Society for Medical Improvement, October 22, 1883.

uterus that I could clamp, and also both ovaries and tubes, so that menstruation would be done away with. The patient suffered from considerable pain for two days, and thirty-six hours after the operation had a smart hæmorrhage. I was called at one A. M., and found the clamp loose, the uterine tissue having shrunk away from it. I tied beneath the clamp with carbolized silk, but the hæmorrhage had already ceased. Twelve hours later another slighter hæmorrhage took place. No more hæmorrhage occurred after this, but much black fluid blood was discharged upon the dressings and syringed out. The wound was syringed once or twice a day, under the spray, as was necessary, and the tube was gradually shortened. The temperature during recovery varied from 98° F. to 101.4° F. on the second day, but averaged very nearly normal, and the pulse was never over 100.

She left the hospital on the thirtieth day after the operation, and soon afterwards returned to the country, having gained flesh and strength and color in her cheeks, and being wholly free from pain. There was a small granulating surface at the site of the wound which was depressed and looked like a second navel which had been pulled inwards. The os uteri could be felt in the upper part of the right side of the vagina, but a sound was not inquisitively pushed through it, as I preferred to let well enough alone for the present. I hope to see the patient at some future time, and shall perhaps be bolder in my investigations. The specimen was handed to Dr. A. N. Blodgett, and the following is his account of it:—

The specimen consists of the fundus and body of the uterus, which has been amputated at the cervix. Attached is the left broad ligament, the left Fallopian tube, the left ovary, and a sac, the size of a large orange, situated at the pelvic extremity of the broad ligament. The right ovary is present, but is detached from the other organs. The right Fallopian tube and broad ligament are not apparent. Upon the peritoneal surfaces of the uterus and the entire surfaces of the broad ligament are adherent remains of partially organized blood coagula, which hang as shreddy tufts from every part of the serous surface. Upon the posterior aspect of the broad ligament is a sac, the walls of which are composed of dense shreddy coagulum, but which has no present contents.

The uterus is deformed, the left horn being greatly distended, forming an oblong conical pocket which is impervious at its superior extremity, there being complete atresia of the left Fallopian tube. The right horn of the uterus is apparently normal in size and relatively very short. The section by which the amputation of the organ was effected passed through the body of the uterus at a point in which the left Fallopian tube still constitutes a separate cavity in the wall and body of the uterus, thus presenting two openings upon the amputated surface, one the cavity of the uterus proper, or perhaps better described as that of the right horn of the uterus, and the other the canal of the left Fallopian tube and left horn of the uterus. The wall of the uterus is very thick and dense; on the right side it is much thinner, and the thickness constantly diminishes toward the region of the Fallopian orifice. The tissues are at present everywhere wrinkled and contracted, but the uterus is said to have been the size of a child's head at the time of the operation.

The present appearances are as follows: From the seat of amputation to the top of the right cavity in the

middle line five centimetres. From the same point to the extreme end of the cavity in the left horn eleven centimetres. Thickness antero-posteriorly through both walls 4.5 centimetres. From side to side six centimetres. The lining of the right uterine cavity is apparently normal in every respect, and is everywhere thrown into numerous minute folds. The lining of the left cavity differs from that of the right only in respect to the more natural arrangement and condition of the glandular structures of the mucous membrane, which are very striking in this particular specimen. Both canals are everywhere surrounded by normal uterine muscular tissue.

The ovaries are of nearly equal size, and measure each 4.5 centimetres in length by two centimetres in breadth, and 1.5 centimetres in thickness. Their surfaces are covered by shreds of coagulum, and they are softened and elongated. Upon section of the right ovary a corpus luteum is found in the stage of grayish yellow absorption, the cavity being linear and almost entirely obliterated. The contents was a mass of finely granular fatty detritus. No other corpora lutea were here observed.

In the left ovary a number of firm, rounded bodies were felt, some of which bulge slightly above the surface and have the size of a pea. There are also small superficial depressions of some parts of the surface covering the ovary. These being incised led to sacs the size of a pea, containing a bloody fluid. The lining membrane of these small sacs was covered with columnar epithelium, the cells of which are often in a state of more or less advanced fatty degeneration. The interstitial tissue of the ovary consists of a loose, long, spindle-celled connective-tissue structure, soft in feeling and easily separated. In the left ovary no corpora lutea were observed.

The left Fallopian tube was found and its canal followed as far as the junction of the tube with the body of the uterus, where there is complete atresia of its lumen. Its canal is pervious for a distance of eleven centimetres from the body of the uterus to its point of attachment to the before-mentioned sac contained in the broad ligament, at which situation the Fallopian tube is lost. Nothing like a fimbriated extremity can be found. The mucous membrane lining the tube is atrophied, and no ciliated epithelium can be anywhere discovered. The sac in the broad ligament is a cavity consisting of a membrana propria quite thick and elastic, which is at present thrown into loose folds, and an outer layer of peritonæum covered with fringes of organized blood coagula-like adhesions. The lining of the sac was everywhere covered with a layer of pasty matter of a dull red color, which proved to be grumous blood. Upon the posterior wall of the sac were found two distinct perforations in the lining membrane which extended through the entire thickness of the membrana propria and peritonæum, and communicated by free orifices with the abdominal cavity. Other small perforations of the lining of the sac led down to deposits of grumous blood in the tissues, varying in size from that of a shot to that of a Lima bean. Upon the peritoneal surface of the broad ligament near the perforations is a large mass of blood coagulum, a portion of the hæmatocele below alluded to. No connection between the sac in the broad ligament and the ovary is apparent, and no afferent blood-vessel can be discerned.

The pathological condition, so far as this can be determined from the specimen, is the following: There

is essentially a double uterus, the two Fallopian tubes being prolonged toward the cervix so that in amputating the body of the organ two distinct canals are found. The orifice of the right tube communicated with the vagina, while there was complete atresia of the lower extremity of the left canal. The secretions of this cavity had gradually accumulated so as to cause a great distention of this portion of the uterine body. There is a distinct sacculated cavity within the outer portion of the broad ligament which at present contains a considerable amount of grumous blood, and which communicates by two separate and independent openings with the peritoneal cavity, and which had evidently given rise to the large amount of shreddy coagulum at the seat of the peritoneal openings upon the broad ligament, and formed the source of the blood found in the pelvis as an old hæmatocele at the time of the operation. Several other openings of the membrana propria of the sac led to small isolated hæmorrhagic deposits in the tissues beneath, after the manner of a dissecting aneurism. In some of these small sacs the blood has the consistency of putty, in others the absorption of the blood has progressed to such an extent as to leave only a small deposit of coloring matter in the part. At the seat of the perforations above mentioned the interior of the large sac is lined with a firm reddish-brown layer, similar to that seen in the cavity of a true aneurism when healing by obliteration.

THE TREATMENT OF PSORIASIS.¹

BY ARTHUR VAN HARLINGEN, M. D.

PSORIASIS is one of the commoner skin diseases met with in this country. The statistics of the American Dermatological Association show that it occurs in the proportion of about six per cent. in all diseases of the skin encountered. Daily experience would seem to indicate a still more frequent occurrence, because the affection is a disfiguring and annoying one, and therefore patients are more inclined to seek relief, and also because it is a stubborn disease and greatly prone to relapse. The history of a single case will often extend over many years, and bring it under the observation of a number of different physicians.

It is because of the comparative frequency with which psoriasis is met and its stubbornness to treatment, that I have selected it as the subject of my remarks this evening. Having had a good deal of experience in the treatment of the commoner forms of the disease, it is my intention to confine myself chiefly to the consideration of such remedies as have come under my own observation and use, only touching incidentally on others.

The object of treatment in psoriasis is the removal of the eruption as it exists upon the skin. We cannot hope with any degree of certainty in any given case to prevent a recurrence of the disease, or, if you please, a relapse. For the drug has not yet been discovered which will surely take away all tendency to the recurrence of psoriasis, and whoever promises a cure, in the wider sense of the word, to his patient, will, in a very great number of cases, find that he has been too sanguine. Fortunately, however, a certain number of patients do seem to recover. I do not know what has

been the experience of others in this respect, but I have patients who have been under observation three, five, even eight and ten years without relapse. Such cases are, unfortunately, few.

Preëminent among the internal remedies which are useful in the treatment of psoriasis is arsenic, which may be justly called a specific in this disease. I think I am not asserting too much when I say that eight out of ten cases of psoriasis of average character and severity will do better under the use of arsenic than with any other remedy. I prefer Fowler's solution given in the average dose of four minims thrice daily. I think this solution is often prescribed in too large doses, and I am sure the dose of five to ten minims, as given in the books, is too large for ordinary use. Most patients bear a four-minim dose very well, but there are idiosyncrasies. I have sometimes been obliged to limit the dose at the beginning to one minim in cases where subsequently such toleration has been established that twelve minims have been taken with impunity. However, four minims is a good dose to begin with, and if the effect does not begin to show itself within ten days or two weeks, the amount may be gradually increased. Fowler's solution should never be given to the patient in a vial with directions to drop out the requisite number of drops. The patient is apt to make a mistake, vials of different sizes may pour out more or less in each drop, and there is always danger in leaving a half-empty vial of poison about the house. The solution is better given mixed with water, or with wine of iron or other convenient vehicle.

The effect produced by arsenic upon the eruption of psoriasis is, first, in diminishing the quantity of epidermic scales thrown off, and then in preventing the appearance of new lesions. The patches gradually lose their scalliness, begin to heal in the middle, and disappear little by little. It must be remembered, however, that arsenic is a slowly acting remedy, and its use should be continued through many months to get the best security against relapse.

The other liquid preparations of arsenic used in psoriasis are Pearson's solution of the arseniate of sodium, and Donovan's solution of the iodide of mercury and arsenic. I have used the former in a few cases without noticing any perceptible difference as regards efficiency between it and Fowler's solution. The solution of mercury and arsenic (Donovan's) I have employed in certain stubborn cases with good effect where Fowler's solution has seemed to fail. The existence of syphilis as the cause of the eruption in these cases having been excluded, I am at a loss to account for the apparently greater efficacy of the mixed treatment. The dose given was as much as ten drops, and although this solution is weaker in arsenic than Fowler's, yet I am inclined to the opinion that the conjoint administration of the two drugs, mercury and arsenic, was the cause of the good result rather than the increased dose. I should be inclined to use Donovan's solution in cases where Fowler's solution shall have failed.

The mixture of arsenious acid, black pepper, and sugar of milk, known as Asiatic powder, and recently placed in the Pharmacopœia with the pepper left out, among the triturations, is of no particular value above the other preparations, and is not so convenient of administration.

Hypodermic injections of solutions of arsenic have been employed in the treatment of psoriasis, but I have had no experience in their use.

¹ Read before the Philadelphia County Medical Society, October 17, 1883.

Next in value to arsenic in the treatment of psoriasis is iron. I commonly employ the tincture of iron in cases where arsenic does not seem indicated. There is one type of psoriasis which includes robust, rosy, well-nourished individuals, "the very picture of health." Such people have never been sick a day in their lives, or perhaps may have had slight attacks of articular rheumatism. Such patients do well under arsenic.

But there is another type in which the individual is thin, poorly nourished, and perhaps somewhat anæmic. These are the cases which do well under iron, which is best administered in the form of the tincture of the chloride. With these two remedies, arsenic and iron, I usually succeed in curing ordinary cases of psoriasis, adding in rare cases cod-liver oil to the use of the tincture of iron when debility is present. Of course local applications are employed at the same time. Of these I shall speak presently.

In addition to the internal remedies mentioned, quite a host of others have been employed from time to time. Such are tar, carbolic acid, copaiba, phosphorus, tincture of cantharides, tincture of maize, carbonate of ammonia, acetate of potassium, and other diuretics; the alkalies, as liquor potassa, and the alkaline mineral waters. Of these I have found alkalies and diuretics useful in cases when a markedly inflammatory condition of the skin has existed. The other remedies I have not employed, nor do I think the reports of their usefulness based on a sufficient number of facts, except in the case of tar possibly, to make it worth while to try them.

Equally important with the internal treatment of psoriasis is the external management of the disease. It is, of course, desirable to remove the eruption as soon as possible wherever it may be situated; but when it is found upon the face, there is every reason to endeavor its cure by all means and in the shortest time. External and internal treatment should therefore be combined when practicable. The first thing to do is to remove the scales. This may be done by means of local or general baths, wet dressings, etc., or by inunctions with fats and oils, by the use of soap, or by the action of impermeable dressings of India-rubber or oil silk. When only a few lesions are to be acted upon, a solution of salicylic acid in alcohol, one part to sixteen, well rubbed in with a sponge, will remove the scales very nicely.

The scales having been removed, the next thing is to apply such substances to the diseased patches as may most quickly modify the abnormal condition of the skin, and bring it back again to a healthy condition.

An innumerable number of applications have been recommended for this purpose, the most of which I shall pass over with only a mention. Such have been soaps and alkalies, citric and hydrochloric acids, sulphur, iodine, and mercury, alone and in combination, together with the various forms and preparations of tar, creosote, and carbolic acid.

All of these remedies have their uses, and most of them, especially the tarry preparations, I have employed time and again in years gone by and with moderate satisfaction. The introduction, however, of chrysarobin or chrysophanic acid some six or seven years ago put quite a new face on the local treatment of psoriasis; and since then, with the aid of this and other later discoveries, we are able to work a much more rapid change in the appearance and condition of the skin in this disease.

As chrysarobin is perfectly well known to all here present, both as to its advantages and defects, I shall say but little about it in the ordinary form of its application, namely, as an ointment. When it first came out I tried it quite extensively, but its disadvantages seemed so great that I had already begun to restrict its use greatly in my practice, when a new agent appeared, which for every-day use has in my hands, until very recently, almost entirely superseded all other local applications. I refer to pyrogallallic acid.

I do not think pyrogallallic acid is by any means so well known as an application for the relief of psoriasis as is chrysarobin. If I may judge by the infrequency with which its virtues are mentioned in the journals (although I believe all recent text-books speak of it), it is not in general use. But it is, in my opinion, one of the very best remedies we have for the cure of cases of psoriasis of average severity. Employed in the form of ointment, of the strength of one half to one drachm of the pyrogallallic acid to one ounce of simple ointment, the effect produced by it is almost as rapid and decided as that brought about by chrysarobin, without the accompanying discoloration. A slight, blackish staining is all that is produced, and the ointment can even be employed in the scalp without markedly discolorizing the hair, if applied cautiously. It is desirable, however, not to apply soap or alkalies at the same time, because this causes a more permanent and deeper stain.

Pyrogallallic acid cannot be used in extensively generalized psoriasis, when large surfaces are affected by the disease, without a certain amount of danger from absorption, as indicated by strangury and olive-green or tar-colored urinary secretions. With care, however, and the occasional suspension of the remedy for short periods, I believe this remedy could be employed even in universal psoriasis with good effect.

One more external application in psoriasis remains to be spoken of, namely, naphthol. This drug, a derivative of coal-tar, was introduced into use several years ago by Kaposi, of Vienna, as a sort of substitute for carbolic acid. He recommends it very highly in psoriasis, in the form of ointment, about eighty grains to the ounce, and I have used it in this and other strengths, and also in solutions in alcohol and oil, with fairly good effect.¹

Naphthol is not so active in its effect as chrysarobin or pyrogallallic acid, but it is much more agreeable, and is, I think, peculiarly well adapted for employment upon such parts as are exposed to the view, as the face and hands. Like pyrogallallic acid, it must be used with caution over large surfaces, as absorption with toxic effects may be produced.

It remains to mention briefly two or three methods of application of these remedies which have recently been brought forward. The first of these is the treatment by medicated gelatine which was introduced by Professor Pick, the well-known dermatologist of Prague. My attention was first drawn to this by a pamphlet which Professor Pick kindly sent me, in which he gave an account of his earlier experiments with medicated gelatines, but I have not as yet had an opportunity of testing this method of medication as I

¹ In a communication read before the American Dermatological Association last month, and published in the American Journal of the Medical Sciences for October, I have given the results of my experience in the use of naphthol in various diseases of the skin, psoriasis among the number. I may refer to that paper for further details as to the action of the drug in this disease.

should desire. I may say, however, that the method does not seem to me calculated to prove convenient and popular in private practice. I had for some time been making some experiments in my service at the Polyclinic in the preparation of gelatines impregnated with chrysarobin and pyrogallie acid, but without much satisfaction, when Dr. Charles L. Mitchell, the well-known pharmacist of this city, sent me some excellent preparations of his own, which seem to be perfectly adapted to the purpose for which they are intended. A bit of one of these gelatine sticks is cut off and placed in a water-bath, where it soon melts into a clear homogeneous fluid, which may then be applied to the lesions of the skin by means of a paint-brush. The advantages claimed are cleanliness and transparency. The coating of gelatine does not rub off on the clothes, and is therefore not so dirty as an unctuous application. A fresh coating can be painted on every day or two as the old layer wears off. The chief disadvantage of this method of treatment is that it requires apparatus which is not convenient to carry about, nor can the patient be trusted to employ it at his discretion. My own experience is that in psoriasis, at least, the gelatine applications are not active enough. I have not, however, used them with sufficient frequency to pronounce a positive opinion.

Recently a solution of chrysarobin in collodion has been recommended in the treatment of psoriasis by Dr. George H. Fox, of New York, and several dermatologists have confirmed his statements with regard to its efficacy. I have employed this preparation in one or two instances, but it has seemed to me so much less active than the chrysarobin ointment that I have not been encouraged to continue its use. It has one great advantage over the gelatine applications, however, and that is that it can be applied extemporaneously and without the paraphernalia which must accompany the use of the gelatine.

A few weeks since a pamphlet by Professor Auspitz, of Vienna, reached me, in which that distinguished dermatologist recommended liquor gutta-perchæ as a vehicle for the application of chrysarobin. I at once obtained a ten per cent. solution, or rather emulsion, of chrysarobin in liquor gutta-perchæ, and happening to have a case of psoriasis of the face and scalp under treatment, I gave some to the patient to apply once daily. The effect was so happy as to encourage me very much to hope that we have in this preparation the most convenient method of applying chrysarobin yet devised; and as chrysarobin is, after all, the most efficient local agent in the treatment of psoriasis as yet brought forward, I have no hesitation in urging the trial of this preparation on any one who may have a case of psoriasis under treatment. It is to be noted, however, that the same watch must be kept upon the skin for fear of exciting dermatitis as when the ointment is used. Only when the liquor gutta-perchæ dries, which it does very quickly, there is little or no danger of rubbing the chrysarobin over the good skin, nor is there much danger, if any, of staining the clothing.

— Dr. Tanner, the notorious faster, has been arrested at Jamestown, N. Y., for practicing on a diploma from a so-called Eclectic College, which has no legal recognition. As usual in such cases he claims it to be a case of persecution aimed against eclecticism.

NAPHTHOL. ITS MEDICINAL USES AND VALUE.¹

BY JOHN V. SHOEMAKER, A. M., M. D.,

Physician to the Philadelphia Hospital for Skin Diseases, Lecturer and Instructor on Diseases of the Skin in the Summer School and Post-Graduate Course of Jefferson Medical College.

NAPHTHOL is one of the remedies of recent introduction, and of the two products of that name the β naphthol is the one which was first used by Professor Kaposi as a substitute for the tar preparations in skin diseases. It was thought by him as the essential and curative ingredient of tar, while it was free from the objectionable features of the latter.

My attention was directed to this remedial agent by Dr. Justus Wolff, a chemist largely interested in the manufacture of coal-tar products, who kindly furnished me a paper on the chemistry of this substance, along with some novel properties which he had observed in it. As this paper, however, is too long for reproduction here in its entirety, and besides is largely of chemical interest only, I will here give it briefly in abstract as far as will be necessary to acquaint us with the chemical character of its subject, as follows:—

Naphthol is a derivative of naphthalene, a hydrocarbon found in large quantities in coal-tar, belonging to the so-called aromatic group. In the fractional distillation of coal-tar various hydrocarbons are obtained at different degrees of heat. Thus at 80° C. benzol distills over; between 80° and 110° C. benzol and toluol mixed; at 111° C. toluol alone; from 111° to 136° C. toluol and the different xylenes mixed; from 136° C. to 142° C. xylenes only; then the cumenes, phenol, and cresols; and at 218° C. naphthalene, which sublimes in colorless, transparent, brilliant, crystalline plates, possessed of a disagreeable pungent odor, the empirical formula of which is $C_{10}H_8$.

Naphthol is produced from this by a substitution of one of the hydrogens in naphthalene by one molecule of hydroxyl = OH.

According to the different positions of the hydrogen substituted in the naphthalene by the hydroxyl two different naphthols are obtained, of which one is called α naphthol, and the other, the one we shall alone speak of hereafter, is the β naphthol of the formula $C_{10}H_7OH$

The naphthols stand in the same relation to naphthalene as phenol to benzol and cresols to toluol. If one of the six hydrogens in benzol is substituted by hydroxyl, phenol is obtained; in the same way are cresols and naphthols formed. By this analogy of constitution of naphthols, phenol, and cresols, the inference may easily be arrived at, that they may prove alike in their disinfectant character as well, and in order to prove this I undertook a series of experiments. Of course the use of commercial naphthol for that purpose was out of the question, and I experimented, therefore, first to obtain a naphthol free from odor. As the crude article contains, as contaminations, sulphur and sulphurous acid, the sublimes thereof will yield, besides the naphthol crystals, also sulphureted hydrogen, thionaphtholes, carbolic and cresylic acid, thiophenols and the like, to which ordinary naphthol owes its pungent and disagreeable odor. I avoided this all by passing a rapid current of steam through its aqueous solution, expelling thus all volatile by-products, and ob-

¹ Read before the Philadelphia County Medical Society, October 17, 1883.

tained naphthol thus in its greatest state of purity, in beautiful silver crystalline scales, as here submitted. This naphthol may again be sublimed and obtained then in elegant white crystals as here shown, but by the heat employed more or less decomposition again takes place and renders the product somewhat odorous and pungent.

In order to test the disinfectant and antiseptic properties of my inodorous naphthol, I added one part thereof in powder form to 480 parts of urine, which at the expiration of six months, at a varying summer temperature, manifests no odor or signs of decomposition, while another of the same urine without addition of naphthol had a strong putrid odor already, after standing for three days only. To this latter I added, after standing thus for eight days, some of my inodorous powdered naphthol in the above-mentioned proportion, and in twenty-eight hours it had lost its putrid odor, and has kept thus up to the present writing, when no putrefaction or signs of it can be detected in either specimen. The same experience I have made with meat immersed in a solution of naphthol in 520 parts of water, as well in other experiments similarly conducted.

Experiments with solutions of the compounds of naphthols with alkalis or alkaline earths prove that these are very much less antiseptic than the solutions of pure naphthol soaps, containing four to ten per cent. of free naphthol, which were found excellent and serviceable in removing odors of putrefaction or decomposition from hands or cloths. They are also very efficacious in destroying clothes or body lice, as naphthol is a very active parasiticide. If naphthol is evaporated by means of heat, the air in rooms contaminated in consequence of disease or otherwise will be found to be rapidly deodorized and rendered fresh and sweet without other odors, making it thus of the greatest value for sick-rooms, hospital wards, dissecting rooms, etc.

As carbolic acid has many disadvantages, and is not the deodorant or antiseptic *par excellence*, the inodorous naphthol can certainly take its place in every respect. As naphthol has been described variously as poisonous and injurious to the animal economy, which by its composition and analogy was not apparent, I felt it my duty to experiment with it in regard to such, and commenced at once, without hesitation, by taking it internally; one part dissolved in 3000 parts of water produced at first heart-burn, a slight sensation in the right lumbar region, and some dizziness. Of that solution an equivalent amount was taken to represent a half grain.

These symptoms disappeared after continuing its use for some days, and while the urine showed, upon analysis, traces of naphthol and naphthol compounds, no albumen or blood could be detected therein. The doses then were gradually increased to four grains per day for six days, and still no untoward symptoms were discovered, while the warmth in the stomach directly after taking was followed by increased appetite. Dr. Schofield, of Albany, reports to me that upon my solicitation he has used it largely; at first experimentally in the Albany Hospital, where it has now become a staple article, and is used almost entirely to the exclusion of other disinfectants and antiseptics. They use it there for all kinds of disinfection in wards, sick-rooms, for wounds, etc., and have abandoned carbolic acid in all but a few cases, and always with the great-

est satisfaction and success. This far the paper of Dr. Wolff.

His experience, as well as that of Kaposi and others, led me, some eight or nine months ago, to employ it both in private and hospital practice, and the success attained with it soon led me to further experiments. I found it to fully sustain the claim that Kaposi had made for it in scabies, psoriasis, and chromophytosis, as well as in some of the chronic forms of eczema, in which it not only allayed the itching attendant thereto, but lessened the infiltration as well. In wounds and indolent ulcers I have found it a most useful detergent and deodorant, removing the fetor and establishing healthy action of the parts. Aqueous solutions, containing half a grain to the ounce, I have used to great advantage as vaginal injections, especially in leucorrhœa and uterine carcinoma, as well as in gonorrhœal affections both in male and female. In diphtheritic throat affections it made a most useful gargle, as well as to remove the fetor of catarrhal and other affections of the buccal cavity. Its greatest value, however, arose from its disinfectant action of the evacuation of fever patients and rooms containing them, while by its absence of odor it did not tend to produce inconvenience both to patient and attendants. Combined with powdered talcum or starch, or both, and dusted into the shoes or stockings of those affected with fetid exhalations of the feet it acts most satisfactorily, and its effects are equally as good in the same affection involving the hands, axillary, and inguinal regions. Combined with other ointments in the proportion of from one to ten grains to the ounce, it not alone preserves the unguent from decomposition, but exercises also an antiseptic action to the parts and the exudation therefrom. A slight admixture to an experimental sample of lard has preserved the same in excellent condition throughout the hot summer months. In chronic psoriasis, particularly when there is great infiltration, a five to fifteen per cent. ointment has frequently been attended with good results. It has also been very effective in squamous and fissured eczema used in combination with lard or gelatine.

To test for myself its antiseptic properties in comparison to that of carbolic acid, I mixed two whites of an egg with equal weight of water, and took one half of this mixture in one vial, adding one grain of crystallized carbolic acid, while to the other half in another vial I added one grain of Dr. Wolff's odorless naphthol. After the expiration of five days the carbolized albumen assumed a putrid odor, whereas the naphtholized part, though discolored by the naphthol, remains to this day, twenty days after the experiment, without odor. A quantity (about half pound) of meat already commencing to putrefy was also at the same date immersed in a saturated aqueous solution of naphthol, with the effect of arresting the putrefaction and preserving it for some time.

After using naphthol so long and successfully without any untoward occurrences, I read, to my astonishment and alarm, that Dr. A. Neisser, in the *Centralblatt für die medicinischen Wissenschaften*, 1881, No. 30, reported most extraordinary toxic effects obtained with naphthol, and that also Kaposi reported having seen hæmaturia, ischuria, vomiting, unconsciousness, and eclamptic attacks in a boy after the external application of naphthol. Also that Squire reports, in the *British Medical Journal*, January 14, 1882, of it producing blisters and irritating the skin.

Dr. Piffard regards it as a dangerous remedy, and Professor Rapon, while he reports good results with it¹ in scabies, prurigo, and eczema, advises in prolonged cases simple ointment to be substituted every fourth week to avoid any possible risk of absorption.

Dr. Neisser stated that one gramme of a saturated solution (which in water would contain about one thirtieth grain of naphthol) injected hypodermically in a dog produced hæmaglobinuria, and shortly afterwards death.

To verify these accounts and satisfy myself on the toxic effect of pure naphthol, if any it possessed, I administered to one rabbit, repeatedly in twenty-four hours, thirty-four minims of a saturated aqueous solution, hypodermically, without any result, either to inconvenience the animal, increase his temperature, diminish his appetite, or cause lethal effect. This method of treatment was pursued for five days, not less than four to five injections being made per day, and the result was still the same. Determined to obtain toxic effects with it, and, if possible, to demonstrate its toxic action by a post-mortem examination, another rabbit was fed, at first every three hours, with one-grain pills of naphthol, and subsequently with two and four grain pills, at the same intervals, but, beyond increasing the appetite of the animal, no special effects were apparent. In consideration of this, one of my assistants, Dr. Charles S. Means, and my student, Mr. F. C. Waterman, volunteered to take naphthol themselves internally, to test, if possible, its action upon the human organism. They commenced with one quarter of a grain dose every two hours, their pulse, temperature, and urine being subjected to the closest inspection both before and after.

The second day they took a half grain every two hours; the third, one grain every three hours; the same on the fourth, while on the fifth and sixth they took two grains every three hours, and on the seventh five grains twice daily. The pulse and temperature did not appear to be affected by this, nor was at any time albumen or blood apparent in the urine. Though they experienced great warmth in the epigastric region after each dose, that passed away in a short time, but left them with slight vertigo, buzzing of the ears, with all evidence of cerebral hyperæmia. The alvine evacuations were softened and of mushy consistence, changed to a clay color, and in one of the cases increased to diarrhoea.

Arriving at a résumé of my experiments, I must certainly proclaim the odorless naphthol which I had received from Dr. Wolff as not a toxic agent; and while I have found it a most useful remedial substance, and a disinfectant and antiseptic of the greatest value, it does not, in my experience, confirm the dangerous influence exercised on the human organism as reported by the gentlemen above quoted; a fact for which I can only account by the greater purity of the material used by me, — purified from the deleterious contaminations above enumerated by the process already described, which is not employed abroad, where yet naphthol is sold and used as reddish crystalline masses, with strong, pungent, and disagreeable odor. That it is far superior to carbolic acid and other disinfectants and antiseptics I have no doubt, and I am informed that in price it is not alone cheaper than the former, but, by its greater efficacy and smaller amount necessary, it is certainly more advantageous, aside from its greatest recommendation of being almost absolutely odorless. It must be

borne in mind that all my remarks apply to odorless naphthol, — only such as I have exhibited, — and that I consider that alone as safe for medicinal use.

RECENT PROGRESS IN PUBLIC HYGIENE AND STATE MEDICINE.

BY SAMUEL W. ABBOTT, M. D.,

Health Officer Massachusetts Board of Health, Lsanary, and Charity.

SEWERAGE AND SEWAGE DISPOSAL.

Sewage Utilization at Pullman, Ill. — The practical results of sewage farming at the town of Pullman, Ill., have been thus far unusually successful, and demonstrate the fact that under favorable conditions the work can be conducted in such a manner as to yield a fair profit on the investment. The town of Pullman has a population of 8000 or more. During the past season the sewage farm has been devoted to an experimental crop of a varied character. A general estimate is given as follows: —

Acres cultivated, 160.

Total investment, \$80,000.

Estimated cost of operating, \$8000.

Estimated value of crops, \$12,500.

Estimated profit beside taking care of the sewage of 8000 people, \$4500.

With longer experience and better appliances the superintendent believes he can considerably increase this profit in coming years.²

Sewerage of London. — Complaints having recently been made that the sewage of London, which is discharged into the Thames below the city, at Crossness and Barking Creek, has become a nuisance to the inhabitants dwelling near the outfalls, the Secretary of State has, in compliance with statutes, recommended the appointment of a royal commission to investigate the cause of complaint. A commission has, therefore, been appointed and instructed "to inquire into and report upon the system under which sewage is discharged into the Thames by the Metropolitan Board of Works, whether any evil effects result therefrom, and, in that case, what measures can be applied for remedying or preventing the same."

Sanitary measures have accomplished much toward reducing the mortality rate of the great metropolis in the past half century, and the report of this commission as a continuance of the same important service will be looked for with much interest.³

The Sanitary Works of Paris. — M. Durand Claye, the secretary of the recent Commission appointed to report upon the sanitation of Paris, has published a summary of the proceedings of the Commission.

Certain points of interest in this report show a decided inclination on the part of the majority of the Commission to adopt a general sewerage plan in place of the storage of filth which has long been tolerated throughout the city. (The traditional sewers of Paris are not sewers in the sense of conduits for the conveyance of household sewage.)

At its session of June 21st the Commission adopted several resolutions relating to the regulation of —

(1.) Water-closets, with their accompanying supplies of water, and the soil-pipes connected with them. Also the necessity of traps between each house and the sewer.

¹ Sanitary News, October 1, 1883.

² Report of Metropolitan Board of Works, May, 1883.

³ British Medical Journal, page 750.

(2.) Privy vaults, and the necessity of their discontinuance wherever connection could be made with the sewers.

(3.) The immediate abolition of *movable vaults* or tanks wherever it is possible, except where dry absorbents are carefully used.

(4.) Apparatus for separation and dilution. Contrivances of this sort, displaying but little ingenuity, have been in use for many years, subjecting basements and cellars to constant liability to foul stench from overflow and neglect. Their use is properly condemned, and the substitution of a water supply and sewer connection advised.

The management and care of the sewers occupies a portion of the report. Flush-tanks are advised adapted to sewers having a total length of 424 kilometres (262 miles), each flush-tank to hold ten cubic metres of water (2640 gallons).

The purification of the sewage is also mentioned as a matter of importance, and its treatment by soil irrigation upon land along the banks of the Seine advised as a process devoid of danger to the public health. The execution of the plan advised by the Commission will occupy several years. Thus far the Municipal Council have refused to appropriate the sum requested for these public works by M. Alphand, the president of the Commission.¹

The Sewerage of Chicago. — The proper disposal of the sewage of a large and level city like Chicago is not an easy problem. A peculiar feature in its present system is the Fullerton Avenue conduit, a large brick sewer in which the contents are compelled to flow in either direction, east or west, as occasion may require. This result is accomplished by means of a screw like a steamer's propeller working in the sewer with a capacity of 24,000 cubic feet per minute at 100 revolutions. At one end the outlet is into the river (North Branch), and at the other into the lake. The city water supply is drawn from the lake at a point in doubtful proximity to the sewer outlet. During the greater part of 1881 the sewage was forced into the lake, and as a consequence "the effect upon the water supply was painfully apparent during the greater part of the year notwithstanding the claims of the authorities that the sewage thus forced into the lake through the conduit obligingly flowed off in a northwesterly direction or south along the shore. The water given the city to drink was plainly contaminated by sewage. The underground communication between lake and river still continues its misdirected mission of conveying sewage from the latter to the former, and the lake shore is washed with the black and decomposing waste of thousands of distilleries, factories, stables, and houses. Where this conduit operates, as was originally intended, from lake to river it serves a useful purpose."²

Bunzlau. — As a contribution to the history of sewerage and sewage disposal, the recent Hygienic Exposition at Berlin has brought to light the fact that Bunzlau, a small town in Silesia, of 8000 inhabitants, has had for more than three centuries (since 1559) a complete system of water supply, sewerage, and sewage utilization by surface irrigation. In an ancient chronicle of 1538 the advantages accruing to the town from its water supply are detailed as follows: —

- (1.) To quench the thirst of man and beast.
- (2.) To bleach linen.

(3.) To preserve live fish in tanks.

(4.) To run mills.

(5.) To cook and brew beer.

(6.) To wash and bathe.

(7.) To carry away the impurities of the soil.

(8.) To irrigate gardens and fields.

The larger sewers are chiefly rectangular, and built of slabs, and are of ample dimensions.

The first attempt at sewage irrigation by this town was made in 1559, and was quite successful in its operation. At a later period each farmer was given the use of the sewage for certain hours, varying from two to four hours per week. The sewage is distributed in open trenches.³

Filtration. — A recent improvement in the filtration of sewage or of any liquids containing solid matter, is the Farquhar filter, an apparatus which claims the following advantages: —

(1.) Economy of labor.

(2.) Large volumes of liquid can be filtered continuously, and in a short space of time.

(3.) Economy of material.

(4.) Absolute limpidity of liquids filtered.

The deposit of a layer of solid material upon the upper surface of filter-beds has thus far proved a serious difficulty, much time and labor being required to remove the deposit and prevent clogging. The Farquhar filter overcomes this obstacle. Its construction briefly stated is as follows: A closed iron tank or cylinder containing a quantity of sawdust, charcoal, or other porous material. A revolving iron plate carrying a knife or scraper continually removes the deposit from the upper surface of the filtering material, and leaves it in the upper part of the cylinder, from which it may be removed as often as necessary. The liquid to be filtered is admitted from above under pressure, and the clear liquid flows out below. The capacity of the Farquhar filter has recently been tested experimentally, at the Mystic Valley sewer, through which flows an offensive, turbid, chocolate-colored sewage; its solid residue comprising the waste products of the tanneries of Woburn and Winchester. Its final success in treating this sewage remains to be proven. It has been treated during the past season in a series of shallow settling-basins, which removed a portion only of the solids.

FOOD AND DRUGS.

Vanillism. — Under this title Drs. Layet and Arnouzan have communicated to the French Association for the Advancement of Science the results of certain researches relating to the physical qualities, the effects, and the parasites of vanilla. Several cases of poisoning by the eating of vanilla ices and ice-creams are cited. At first the analyst had decided that the poisoning was due to the formation of lactate of tin in the vessels which were used in the process of preparation. But the confectioner having been obliged to abandon his business in consequence of the disturbance which followed the poisoning, his stock of vanilla was sold to a confectioner in another city, and cases of poisoning again followed its use. Other cases were also observed in Berlin.

The symptoms were much like those of cholera, — continued vomiting, frequent diarrhoea, epigastric pain, cramps in the legs, extremities and face cold and purple. Recovery in three or four hours after the onset

¹ Revue d'Hygiene, September, 1883.

² Sanitary News, October 1, 1883.

³ Sanitary Engineer October 4, 1883.

of symptoms, which usually take place in less than two hours after eating the *glace*. The same result has been noticed after eating other preparations in which vanilla had been used.

Other disturbances due to the handling of vanilla are also reported as occurring among operatives who cut the vanilla pods in small pieces. These disturbances consist in papular eruptions of the face and hands, with heat and swelling of the parts affected, pruritus, and irritation of the eyelids and the eyes, the eruption often attended with patches of redness and desquamation.

Bordeaux produces at present a crop of about 23,000 kilos. (50,000 pounds) of vanilla per year.

Infernal Machines in Beef.—In labeling pieces of meat for customers, butchers and others have found a very convenient article, which may be termed a barbed wire staple. The paper label is laid upon the meat and the pointed staple driven through it into the meat. Occasionally the paper becomes detached, leaving the staple in the beef. As a consequence two cases of œsophagotomy were recently reported from Philadelphia hospitals. A patient in a Massachusetts institution also found one of these hooks in her mouth while eating meat.

At a recent meeting of the Philadelphia County Medical Society the danger apprehended from these "skewers" was referred to as being overestimated. Possibly a few more cases of œsophagotomy may be necessary to illustrate their relation to hospital practice.

For convenience in identifying this barbarous implement the accompanying cut shows its shape and dimensions. Width 12 mm. Length 18 mm.

It is made of stiff iron wire; each point is quite sharp, and barbed like a fish-hook. They have been found in canned beef as well as in fresh meat.

Milk Inspection in Zurich.—In reply to inquiries as to the milk inspection in Zurich, Alderman F. Schlatter states that the work is intrusted to the care of a health commissioner and health inspectors or police. Analyses are made by two chemists, one for the city and another for the canton, acting independently of each other.

Inspections are made at early morning, without regularity as to time and place.

The instruments used by inspectors are a thermometer, a lactometer (Muller-Quevonne's), and a stand-glass. Milkmen are required to register and receive a license. They are to be treated uniformly, but not in regular order, a dozen or more tests to be made for each one.

Inspections are not made in a crowded street, but samples are taken to a neighboring police station, shop, or bakery, and a small fee paid to the proprietor for its use.

Punishments are provided for adulteration and for repetition of the act. Appeals to higher courts are also allowed.

In a population of 76,000 (26,000 in the city and the remainder in its suburbs) 12,500 litres of milk were daily sold in 1882. Two thousand one hundred samples were inspected as to their appearance, taste, and specific gravity, of which number 226 were analyzed by the chemists. Thirty-seven were punished.



In summing up the writer evidently believes that more efficient work might be done with more hearty coöperation on the part of the higher authorities, and suggests the publication of names as an additional measure.

The local regulations recognize two grades of milk, whole milk and skimmed milk (*halbabgerahmte Milch*), the latter being defined in the statute as a mixture of equal parts of skimmed evening milk and whole morning milk.

The whole milk must show a specific gravity before skimming of from 1029 to 1035, and after skimming not less than 1033. The chemical analysis must give at least twelve per cent. of solids, including three per cent. of fat.

The *mixed milk*¹ must show a specific gravity before skimming of 1030 to 1036, and after skimming not less than 1033. Its analysis must give at least eleven per cent. of total solids, and 2.3 per cent. of fat. The two sorts of milk must have distinguishing labels upon the milk-cans.

INFECTIOUS DISEASES.

Typhoid Fever of Faecal Origin.—M. de Henry communicates to the Society of Public Hygiene of Bordeaux two series of cases of typhoid fever in which contaminated drinking-water was the medium of communication. In the village of Chez-Ganivet twenty-two people were attacked, and in this group the soiled linen of some patients ill with typhoid fever had been washed in a spring which was used for drinking purposes. In the second series an epidemic occurred in a prison at Ha, the convicts only in a certain quarter being attacked, thirty-nine in all. The prisoners awaiting trial, and also the women, in other parts of the prison all escaped infection. On inquiry it appeared that the water supply for the exclusive use of the convicts was pumped from a cistern in the court-yard. The convicts, after emptying their stool-buckets, came to this cistern and rinsed them, throwing the water on the ground, whence it doubtless made its way into the cistern. The other inmates of the prison obtained their water supply elsewhere.²

The Typhoid Epidemic of Paris.—Professor Pagliani, of Turin, in commenting upon the prevalence of typhoid fever in Paris, rejects the theory advanced by Virchow that rain-water, impregnating the soil, favors decomposition and the development of typhoid germs, and states his own proposition as follows: "Whenever heavy showers of rain fall, especially in torrents, as often happens in Paris, the volume of water in the great sewers increases in an extraordinary manner, and causes stagnation or rather regurgitation in the smaller conduits which connect inhabited dwellings with the principal sewers."

The rush of great volumes of water into the sewers stirs up the mud and filth which are deposited in seasons of dry weather, and the effluvia set free finds vent at the points of least pressure, the soil-pipes, water conductors, etc.

The writer shows that typhoid fever has prevailed most in those parts of the city where the foregoing conditions are found. He also adds the following proposition: "The number of cases observed is not in proportion to the quantity of water which falls upon

¹ Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege. 15 B. 3 H. 1883.

² Gazette Hebdomadaire des Sciences Med. de Bordeaux, 1883, page 188.

the ground, but to the quantity and probably to the quality of the gases (miasmas) set free and forced back toward the neighboring dwellings."

Epidemics arising from similar causes are quoted, that of Cologne, reported by Eulenberg as due to the obliteration of a sewer by the freezing of the Rhine; others, in Brussels and in Naples, due to choking of sewers in time of violent storms.

The conclusions of Professor Pagliani are in favor of an adoption of movable receptacles, and the complete removal of their contents for the benefit of agriculture, or the adoption of the pneumatic system of Liernur.¹

Vaccine and Variola.—A series of papers by Dr. Leonhard Voigt upon the relations of variola to vaccinia are given as the result of many years' experience and observation, and the following essential points enumerated.

As the practice of animal vaccination has been conducted quite extensively in the United States during the past ten years or more, and the opinions of animal vaccinators have been freely expressed upon the same subject, a different conclusion has been drawn, especially as to the eighth and ninth propositions of the writer.

(1.) Vaccine lymph may be procured by vaccination of the cow with lymph taken from the pustules of persons sick with small-pox. But no one can be sure that every attempt will be successful.

(2.) The vaccine obtained in such a manner is suitable for the vaccination of men on account of the energy of its operation, but it should only be used after transmission from animal to animal several times, by which proceeding its effect is mitigated.

(3.) In the first year of its use vaccine lymph obtained in this way possesses a higher efficiency than an animal stock several years old.

(By this term, a stock several years old, we should understand lymph transmitted from animal to animal, at the time of the maturity of the vesicle, for several years. In accordance with the custom of animal vaccinators each year would represent a series of fifty-two to sixty-five animals, the period of maturity presenting slight variations.)

(4.) Vaccinia and variola originate in the same virus, and each gives to the person attacked a certain claim of immunity against suffering arising from the same source.

(5.) The duration of this immunity is in proportion to the intensity of the attack.

(6.) Among people who have had the small-pox twelve years before, we find almost the same susceptibility to vaccination as among those who were vaccinated at the same time. Consequently children twelve years of age, and vaccinated during the first year, are liable again to take small-pox.

(7.) Therefore, the imperial vaccination law which orders the vaccination of infants and their re-vaccination at twelve years of age fulfills an actual necessity.

(8.) Animal lymph transmitted from calf to calf, and originally very active, loses its power earlier than humanized vaccine transmitted from arm to arm. Humanized lymph gives the best results in men and animals in the long run; therefore the animal vaccine of old stock promises inferior results to retro-vaccination of the first remove.

(9.) Lymph carefully propagated, and originated from the cow-pox but a short time before, is the most efficient, not only in its animal but especially in its humanized form. Therefore resort should frequently be made to the original cow-pox in order to obtain lymph as protective as possible.²

Antiseptics.—In some researches on the aseptic power of certain substances with reference to bacteria M. Miguel publishes a table in which is given the weight of each substance required to render imputrescible a litre of beef soup (bouillon de bœuf).

We give a portion of the table in the order in which they are published:—

	Grammes.
Biniodide of mercury	0.025
Bichloride of mercury	0.07
Nitrate of silver	0.08
Iodine	0.25
Chlorine gas	0.25
Bromine	0.60
Sulphate of copper	0.90
Salicylic acid	1
Benzoic acid	1.10
Mineral acids	2 to 3
Essence of bitter almonds	3.20
Carbolic acid	3.20
Pernanganate of potash	3.50
Arsenious acid	6.00
Hydrate of chloral	9.50
Salicylate of soda	10
Sulphate of iron	11
Borax	70
Iodide of potassium	140
Glycerine	225
Hyposulphite of soda	275

To prevent the dispersion of microbes from the sick he advises treating the dejections of patients with the following solution:—

Sulphate of copper	20 grammes.
Sulphuric acid (66°)	40 grammes.
Water	1000 grammes.

Also the bathing of the bodies of patients with a solution of iodine 1 part to 1000, or of bichloride of mercury 1 to 5000.

VITAL STATISTICS.

In commenting upon the valuable reports of the British Registrar-General, a modern writer (Dr. Rumsey) styles them the first text-books in the study of hygiene.

The series of Registration Reports of Massachusetts have reached their present stage of perfection only through a gradual introduction of successive features, authorized by efficient legislation.

Michigan, Vermont, and several other States have for several years conducted a similar work, and New York is about to inaugurate the work of registration for its large population. A uniform plan or system adopted by all the States would afford a combined result of great value.

A series of papers on Vital Statistics recently begun in the *Sanitary Engineer* by Dr. John S. Billings, U. S. A., will be welcomed as a valuable contribution to this department of State medicine. The first paper is mainly definitive, and gives the meaning of the terms mortality rates, expectation of life, mean duration of life, probable duration of life, and specific intensity of life. In the second paper he discusses the question of the probable and possible errors and variations in statistics, independent of the accuracy of their data or of their relations to sanitary condition.

¹ *Giornale della R. Società Italiana d'Igiene*, 1883, page 238.

² *Vierteiljahrsschrift f. öf. Gesund.*, 15 B., 3 H., 1883.

The frequent publication of information relating to this important subject and its general diffusion amongst professional men is desirable, that every physician who has to do with the initial and the final stages of human life may recognize the necessity of making careful records of all essential data, and of contributing his individual share to the common welfare of the State.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

OCTOBER 22, 1883. DR. CHARLES D. HOMANS presided.

DR. JOHN HOMANS read a paper on

TWO-HORNED UTERUS (UTERUS BICORNIS). THE LEFT HORN NOT COMMUNICATING WITH THE VAGINA. SUPRAVAGINAL REMOVAL OF UTERUS, FALLOPIAN TUBES, AND OVARIES. CURE.¹

DR. Homans spoke of the value of auscultation. When the aorta can be heard the tumor is generally ovarian. This patient was eighteen years old, and well and strong. Operations have been commonly done as a last resort on feeble patients.

DR. J. P. REYNOLDS had listened with deep interest to this remarkable case. Beside the intrinsic importance of the record such histories are also of great value to the profession here and everywhere in the increase of courage that they bring to those who hope to find in a new appreciation of Cæsarean section, in Porro's operation, or in its modifications, chance of escape from the horrors and the disgrace of craniotomy. The resort to the latter dreadful alternative implies for the obstetrician an admission that his work has failed. The statistics, inestimable in worth, which our countryman, Dr. Robert P. Harris, has with conscientious toil laid before the profession, bid fair to compel us to rewrite the history of operative obstetrics. What may not be hoped for our art provided Dr. Harris's teaching as to the paramount importance of timely resort to operative measures becomes generally appreciated by medical men, while at the same time successes like that reported to-night have trained up in one community and another surgeons who when called will be found equipped for the work.

May we, if the demand comes, be enabled to add from this neighborhood yet one more triumph like that which Dr. Eliot Richardson, in Baltimore, has within a few months achieved. Each such instance brings help to many others beside those whom it immediately concerns. Dr. Homans' case is unique, and it is matter for congratulation that such an operation can be done in our neighborhood.

DR. W. E. BOARDMAN had never met with a report of a case of the kind, and was left to inquire if in future, if the diagnosis were made, the surgeon would feel authorized to attempt removal. There have been, perhaps, a dozen cases similar to this one which have been recognized during life, and have been relieved by opening from the vagina or rectum. The tumor projects into the vagina or parallel with it, and that is given as one of the diagnostic marks. Many cases of

hæmatometra with atresia vaginæ have been relieved by an artificial vagina, and these patients have menstruated, and have, if he is not mistaken, borne children. He did not raise the question as a criticism of the paper, but for the purpose of starting discussion, and he expressed no opinion himself.

DR. Blodgett's report sustains the general statements of writers as to the conditions found in the anomaly. The bearing of the case on the study of menstruation is noticeable. Here the tube had no communication with the uterus, but nevertheless contained grumous matter pointing to the probability of menstruation. There is every reason to suppose it came from the tube in which it was found. The question of development forms an interesting study, and every case may contribute much towards the solution of the inquiries as to their diagnosis and treatment. In the only case of the kind met with by the speaker the vagina was double, the larger sac being blind. The patient applied for the relief of sterility, coition having taken place in the blind opening.

DR. REYNOLDS, while admitting, as he thought every one must, the very exceptional character of the case, asked if the account of it did not show that an opening into the vagina would have failed to give relief. The second sac, having no connection with the enlarged horn, already torn at one point, and discharging into the peritonæum, could not possibly be reached.

DR. BOARDMAN thought it did in this case, but that it is an extreme one, and could not have been recognized. He thought most surgeons would hesitate, and asked the reader what would be his course should he meet a similar case, and make a diagnosis of occluded horn.

DR. HOMANS said it is a hard question to answer without more study. Much of the success depends on the completeness of antiseptic precautions, which are hard to carry out in a wound opening into a mucous cavity. He could not reach the os, and the tissues through which a drainage tube would have passed were thick. The tube must be large, ought to be a double current tube, with the end in a vessel of carbolic acid, and must be sewed in. He should have expected a long, tedious convalescence, with rises of temperature. Then the artificial opening would probably close on withdrawal of the tube, leaving the patient as badly off as before. If the uterus had been distended and elastic, with a well-marked presentation of the os, he thinks tapping through the vagina might, perhaps, be the better operation. He did not know anything more before the abdominal section was made than that he had a thick-walled tumor full of fluid to deal with. He does not think aspiration of ovarian tumors through the vagina a particularly fortunate operation, and puncturing the imperforate hymen has often been fatal. Having punctured and got a slow recovery you cannot then change the operation. He thinks acting on surgical principles and succeeding points to an operation as a good one.

To a question of Dr. Boardman's he answered that the tumor formed a globular mass one and one half inches within the vulva. If he felt sure of succeeding in another case like this one he would adopt the same method.

DR. BOARDMAN said that although in cases of atresia of the genital tract where puncture has been made through the rectum the results have often been fatal from septicæmia, yet that good results have been ob-

¹ Vide page 436 of this number of the JOURNAL.

tained by making the opening through the vagina, and especially by the rapid operation as practiced by Dr. Emmet.

MANIA. RUPTURED CERVIX UTERI.

DR. W. F. WHITNEY presented a uterus removed nineteen hours after delivery. In the absence of the attending physician he gave the history. Maniacal symptoms came on during labor, for which turning was resorted to. There was some hæmorrhage easily controlled, mania continued, and the patient died. The uterus was torn from the external to the internal os, but the tear did not extend into the peritonæum. The cause of death was in the head.

DR. C. E. STEDMAN had seen a case of placenta prævia at the seventh month. During labor the patient, a healthy young woman, with her second child, became violently maniacal, and died shortly after the death of a putrid child. There was no great loss of blood. There was no autopsy. There had been no symptom of brain disease, the only trouble being that after the first hæmorrhage, a month before, she could not be kept still, but so good was her general health, she had made a visit in the country contrary to advice.

Recent Literature.

The Diseases of Women. A Manual for Physicians and Students. By HENRY FRITSCH, M. D. Translated by ISIDOR FURST. New York: William Wood & Co. 1883.

This is the March issue of Wood's Library of Standard Medical Authors, and is fairly up to the standard of the other works of this and former similar series. Following, so soon, however, after Hart and Barbour's *Manual of Gynæcology*, which appeared in January and February, it suffers decidedly by comparison with that original and interesting work. This is commonplace, and while there is very little to object to in its pages yet it hardly marks an advance in this branch of literature. It presents so little that is new that one scarcely understands its *raison d'être*. We could mention a dozen similar books, any one of which would be as valuable to the physician and student as this.

The fact that there are so many works which profess to cover the whole ground of gynæcology within a few hundred pages, and which do it fairly well, would we should think lead the surgeon who is anxious to write something of service to the profession to investigate thoroughly and minutely some special subjects which are still obscure. However, the book being here, it is our province to criticise it. We regret not to have seen the original German edition, so as to have been able to judge of its style. As translated the sentences are in many instances anything but models of correct English. They plainly betray their origin, being often Anglicized German rather than English, and this fault we mistrust must be charged to the translator. As for the subject matter itself it does not need any extended criticism. The whole realm of gynæcology is tersely but thoroughly surveyed, and the views advanced are in the main sound. The author is on the whole conservative, so much so in fact that he hardly does justice to the recent advances that gynæcology has made in America. A few of the more salient points of criticism may be briefly mentioned. We thoroughly agree

with the author in his statement that sponge tents should be abandoned. When we have other substances which will answer the purpose perfectly well there is no excuse for using so dangerous a method of treatment. We are surprised that he should consider puncturing the cervix with the bistoury as effectual in depleting the cervix as leeches. Certainly the latter deplete a much larger area, and follow nature's method more nearly.

When speaking of chronic catarrh of the bladder he does not mention that most valuable method of cure, namely, the formation of an artificial vesico-vaginal fistula, this securing thorough drainage and perfect rest for the bladder. As he does not recognize laceration of the cervix as a fruitful source of erosions of the cervix, he naturally does not mention the repair of the laceration as a method of cure, but advocates cauterizations with nitric acid.

His views as to displacements and their relief by pessaries are in the main good, but we fail to see evidence for his statement that anteversion is always a sequel or accompaniment of metritis or perimetritis. Nor do we think he has the right view of the action of the Hodge pessary, as he evidently thinks it acts by stretching the vagina, and not as a lever. He condemns the use of elastic rubber rings in cases of prolapse, but advocates using them for versions and flexions. The same arguments against employing them would hold equally good in the latter case.

The chapter on parametritis and perimetritis is very good.

Diagrams for Recording Diseases of the Ear. A. E. Wilde & Co. Cincinnati.

A series of diagrams, each containing three plates, one of the membrana tympani with the manubrium, short process, anterior and posterior folds and long arm of the incus, shown in outline, one of a perpendicular section of the whole ear, and one of a horizontal section of the whole ear, with the mastoid cells. These diagrams, which are drawn in outline, are made for both right and left ears, and will prove valuable for sketching the various pathological conditions with which the surgeon has to deal, and which it is often impossible to retain in the memory or describe readily in words. It is carrying out for the ear what has been done for the eye, chest, and abdomen, with similar outlines, and gives the surgeon a quick and easy method of making important records. The execution of the plates is good and seems to leave nothing to be desired.

A History of Tuberculosis from the Time of Sylvius to the Present Day, being in Part a Translation, with Notes and Additions, from the German of Dr. Arnold Spina, containing also an Account of the Researches and Discoveries of Dr. Robert Koch and other Recent Investigators. By ERIC E. SATTLER, M. D. Cincinnati. 1883. 191 pages.

This book will be chiefly of value to those who wish to gain a clear idea of the work which has been done on the question of the inoculability of tuberculosis and its parasitic origin. There is nothing of original research in the book, but it is fairly well up to the latest advances which have been made. Although endeavoring to present an impartial statement of the subject the author is inclined to doubt the value of Koch's discoveries.

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ALASKA FROM A MEDICAL POINT OF VIEW.

In the year 1881 the United States Revenue Cutter Corwin made a cruise to Alaska and the Arctic Ocean on its relief expedition to the Signal Station at St. Michael's. On this voyage many facts of scientific interest were observed and recorded. Among them the observations of Dr. Irving C. Rosse, of a medical and anthropological nature, are deserving of special mention both from the intrinsic value of their subject-matter and on account of the charmingly entertaining style in which they are communicated. The facts remarked by Dr. Rosse may be classified according as they concern the effects produced upon the visitors by the peculiar conditions under which they found themselves, and those phenomena observed among the aboriginal inhabitants, due in part to those same conditions, become permanent, and in part, of course, to race idiosyncrasies.

Under the former heading we notice with interest that a discrepancy was often observed between the record of the thermometer and the feeling of the observer, or, as the writer expresses it, between physical cold and physiological cold. With the thermometer at 45° F. the temperature was described as "murky," and again at 60° F. the direct sun heat was once "almost overpowering." Whereas the experience of travelers in other latitudes, as, for example, in the Peruvian Andes, is cited as showing a keen and penetrating cold at the same temperature, 60° F. As Dr. Hayes went in swimming in a pool of water on top of an iceberg in Greenland, and as other northern travelers have bathed in Siberian waters, so our writer took his plunge into the icy arctic sea on one of the "physiologically warm" days, and enjoyed it. The whole subject of heat production and temperature equilibrium among northern peoples as well as in the marine mammalia is one of exceeding interest, and the reported facts of a physiological rise of temperature after exposure to cold water or air in temperate climes may possibly indicate some special adaptation of thermic functions in these hyperboreans. At all events it is much to be regretted that the only clinical thermometer carried by the expedition was broken so early as to prevent any observations being made on the temperature of the human subject under varying conditions; especially unfortunate is it in view of the author's suggestions as to the value of alcoholic beverages in cold climates. Contrary to the teaching of

physiology regarding the vaso-motor effects of alcohol, and contrary also to what has been often claimed, as in a recent paper by Dr. Leffmann before the Philadelphia County Medical Society, to be the experience of arctic explorers of the deleterious influence of alcohol among northern voyagers, we find that Dr. Rosse cites numerous arctic travelers, and coincides with their testimony, to the effect that the moderate use of alcoholic beverages is found to be advantageous in the extreme weather of the high latitudes. But it is possible that the discrepancy is more apparent than real, for we have no thermometric records on the spot to offset the physiological evidence, while alcohol seems to be one of the best antiscorbutics, and we know scurvy to be one of the great banes of northern voyagers. The "heavy-headed revel" which Hamlet confessed his countrymen to be addicted to, and to which travelers in general have observed a tendency in northern peoples, may be, as our author rather intimates, but nature's call for a protective against the inclement conditions of life, but if so, nature seems in some danger of over-doing the matter, for we read of the rapid depopulation of St. Lawrence Island, where one thousand of the inhabitants have perished in three years, and many villages are already quite extinct, a result ascribed to too much of the "bay rum," "Florida water," and other euphonious brands of poor alcohol which struggle past the revenue officers, and for which the Esquimaux exchange their furs with great eagerness. Of course much of the responsibility for this physical deterioration ascribed to intemperance properly belongs to the vile liquors used, and again to starvation. But certainly more exact observations as to the effects of alcohol in the human economy in cold climates are much to be desired.

The northern voyager seems to be, as a rule, tolerably free from acute bronchial or pulmonary disorders while exposed to severe cold, but there is a marked tendency to the development of such affections after his return to a temperate climate. This was observed in the crew of the Corwin, as it has been in other individuals. On the other hand the natives seemed constantly suffering from colds and coughs, a fact which appears to show a greater cold-resisting power in the white race.

Some curious optic and auditory phenomena are recorded. The irregular refraction of the atmosphere at some points, taken in connection with its wonderful clearness in others, gives rise to remarkable deceptions of the vision. The distinctness with which small stones and other objects on a mountain side can be seen at times bewilders the vision, while the vagaries of the mirage and the blending of the real with the unreal leaves one in doubt as to what he actually sees. The sound of a boatswain's orders and of laughter and loud conversation at the distance of two miles, the noise of one's own beating arteries on a still day, and the repetition of echoes, in one case to one hundred times after a pistol-shot, are some of the freaks of acoustics.

The diseases to which the native Esquimaux are specially subject are scurvy, syphilis, and an epidemic which is described at length, and which seems to have

been a species of pneumonia of an extremely asthenic type. No post-mortem evidence was at hand to show whether the pathological condition corresponded with that of the type of the disease common with us. Lung troubles in general seem to follow a mild winter. Intermittent fever at Cook's Inlet, apparently originating on a bluff several hundred feet high, in houses exposed to a breeze direct from the inlet, is a fact more interesting than explicable. Rheumatism and gastric derangement, the latter due often to over-eating, are not rare.

Alaska is a favorable place for surgical operations, wounds healing with great rapidity. The presence of ozone and the absence of "germs" are believed to be the cause of this. Hysteria is a luxury which the female Esquimaux is by no means willing to relinquish entirely to her white sister, and nervous diseases we find to be quite frequent. Our author, with much less leniency for the narcotic weed than for alcohol, ascribes neurotic diseases to "that senseless and filthy habit, the use of tobacco." Certainly they can hardly be considered as the sequelæ of civilization.

Much of interest is told of the social, ethnographic, and other peculiarities of the Esquimaux, which space forbids us to allude to. We may merely mention that the popular notion of the typical Esquimaux cranium is said by Dr. Rosse to be incorrect. Instead of the pyramidal skull, with prominent superciliary ridges, occipital protuberance, and zygomatic arches, and with small brain capacity, one finds the type to have a large facial angle (eighty degrees), and a brain capacity equal to the average Frenchman or German. The squamo-parietal suture has not the convexity noticed in the chimpanzee and the Mound Builder, and the index of the foramen magnum is about the same as in European crania. According to Dr. Rosse the facts regarding the natural intelligence of the Esquimaux correspond with these cranial appearances, and the northern people have by no means the dullness and slowness of understanding which some have ascribed to them. Neither have they any coldness of the passions corresponding to the thermometric range of their climate. Unchastity is as common among them as among the hottest savage that swelters under the tropic sun, and it is evident that something more than external ice and snow are necessary to cool the desires of the human animal.

THE MEDICAL TREATMENT OF INSANITY.

DR. BROSIUS, superintendent of a private asylum at Bendorf, in Germany, and editor of the *Irrenfreund*, goes into this subject in a recent number of the *Allgemeine Zeitschrift für Psychiatrie*. He has already had something to say concerning his lack of confidence in remedies intended to cure the insane, in a paper entitled *Aus Meiner Psychiatrischen Wirksamkeit*. Boerner and recently Schüle have taken very nearly the opposite view of the matter. At Illenau (Schüle's asylum) morphia has been used for many years in immense quantities, and the recoveries have risen from

thirty-six to 39.9 per cent., and deaths have fallen from twenty-five to 15.2 per cent. These cures are not, however, ascribed to morphia, but to the more frequent admission of curable cases.¹

Where sedatives are used in asylums, we have a variety of agencies at work, and it is hard to say that any one medicine has produced a cure. When one sees the great influence of time, and plenty of food, and good hygienic surroundings on the insane, and sees the worst cases recover without medicine, it is difficult to say where medicine has been used in similar cases that it has been instrumental in effecting the cure.

The French physicians many years ago recognized the harmlessness of the expectant treatment, and they gave up depleting forms of treatment before narcotics had become fashionable.

Among the German psychiatrists fifty years ago at Marsburg the treatment of the insane without medicine was agitated. Tigges, Reissner, Leidesdorf, and Reimer seem to have little confidence in opium either in melancholia or any other form of insanity.

In England the feeling against narcotics increases steadily, and is more and more outspoken. As long ago as 1871 Blandford spoke against opium, and especially subcutaneous injections of morphia. In the same year Maudsley addressed the Medico-Psychological Society on the Use and Abuse of Sedatives. Dr. Clouston's researches seemed to show that opium was a dangerous remedy. He thought that sedatives were beneficial if they allayed excitement. This was the question. Dr. Yellowlees did not doubt the value of sedatives, but rarely used them. He regarded the treatment of the general disturbance as of greater importance than the fighting of the excitement.

In 1875 the French Medico-Psychological Society discussed the treatment of melancholia by morphia, Voisin reading a paper favorable to this treatment. But few of those present took the same ground, and Christian thought many cases so treated relapsed sooner.

In the cases of "dysphrenia neuralgica" which Schüle reports, treated with morphia, the length of the attacks was so great that morphia could not be regarded as having shortened the attack. If general experience shows cases to be so long getting well that are treated with morphia, it must be regarded as a retarding influence, in the opinion of Dr. Brosius. As yet, he concludes, we can only say that narcotics are valuable to overcome symptoms.

Krafft-Ebing,² on the other hand, is a very strong advocate of opium, and favors the use of the aqueous extract subcutaneously in a solution of one to twenty. Opium, he says, acts (1) by quieting the cerebral hyperæsthesia and precordial distress, and is also hypnotic; (2) it stimulates the vaso-motor nerves, and thereby causes contraction of blood-vessels; and (3) it has a tonic effect on the central nervous system, and improves its nourishment. When the proper conditions exist a bad effect is seldom seen. It is of priceless value in beginning melancholia; even when the dis-

¹ Band xxxix., Heft 2 and 3. Zur Frage der Medicamentösen Behandlung der Psychosen.

² Lehrbuch der Psychiatrie, page 254, et seq.

ease is at its height it often cures. It is useful in anæmic, hysterical, and hypochondriacal conditions. It is also valuable in the acute alcohol psychoses, delirium tremens, and some forms of delirious mania. The dose is from one fiftieth to one tenth of a gramme. Morphia produces many of the effects of opium, but is not so good where the vitality is much depressed.

Dr. Rudolph Arndt,¹ in his recent text-book, speaks very cautiously of narcotics, especially of opium, which should not be used longer than eight days unless some good results follow. He mentions Chiarugi, Guislain, La Grand du Saulle, Schröder, Van der Kolk, Griesinger, Schüle, Mendel, and others as advocates of opium, but thinks in many of the cases of recovery the same result would have been accomplished without the drug. According to his ideas the narcotics are *poisons*, which, given for long periods of time and in large doses, may produce the most injurious results. It will be better when possible not to resort to their use.

Dr. Mendel² does not believe in morphia for mania, but says that it produces so marked a quieting effect in melancholia agitata, that it is almost pathognomonic of this disease.

MEDICAL NOTES.

— Any person having purchased a copy of the United States Pharmacopœia of 1880, and desiring a list of the corrections since made therein, can procure the same by sending a two-cent stamp to William Wood & Co., Publishers, 56 and 58 Lafayette Place, New York.

— By invitation of Dr. H. W. Williams, the annual meeting of the Massachusetts Medical Benevolent Society was held at his house, No. 15 Arlington Street, last Thursday. The meeting was well attended, and offered, as usual, many enjoyable social features.

— We notice the suggestion that an easily adjustable handle for the laryngoscopic and rhinoscopic mirror, as well as the laryngeal probe, is the ordinary automatic pencil holder made by the Eagle Pencil Company, and sold by stationers generally. The handle of the mirror is held in place in the same manner as the lead, and can be lengthened or shortened by pressure on the spring at the end of the holder. After several months' trial it has been found most satisfactory, from its smoothness, and the short time required to adjust it.

— In regard to the prevalence of typhoid and malarial fevers in Connecticut the secretary of the State Board of Health, in his report for September, says: "The increase in the prevalence of typhoid fever is seen forcibly when the mortality is compared with that from malarial fevers. Thus in the present year the deaths in the cities reported are, from typhoid fever, twenty-three; all varieties of malarial, eight. In 1882, typhoid fever, twenty-one; malarial, twenty-three. In 1881, typhoid, seven; malarial, eighteen (this is for September). The decrease in the mortality from

malarial fever is quite regular. It is true that the total from typhoid is increased by its prevalence in Waterbury, but in quite a large area the reports show a similar increase of typhoid and decrease of malarial fevers. In Waterbury malarial diseases never have been the governing type as far as I can learn. The amount of typhoid fever in Waterbury has, as is usually the case, been exaggerated. The dry weather, low water, and soil upheaval for sewers, are all the factors yet charged. Perhaps there is some general influence whose laws we do not yet know that should be added to these."

— Dr. C. K. Mills, in the *Polyclinic*, speaking of local hysteria and the difficulty of detecting hysterical deafness, gives the preference for that purpose to the Cammann's binaural stethoscope, used by David Coggin in one medico-legal case, for detecting simulated unilateral deafness, as being as sensible as it is simple. Coggin thus described its use: "The patient affirmed that he was deaf of the left ear. I therefore inserted a tightly fitting wooden plug into the right caoutchouc tube, and then put the two caoutchouc tubes into the metal ones. When I tried the instrument on myself, I found that words spoken could not be understood by the right ear. After the patient had adjusted the stethoscope, he repeated without hesitation the words which I had whispered into the bell of the instrument, which served as a mouth-piece. The tube containing the plug was then taken out of the right ear, which was firmly closed by pressure on the tragus. When I again spoke into the stethoscope, which was still in connection with the left ear, the patient positively assured me that he could no longer distinguish the words. He was, of course, aware that the tube through which he had before heard was no longer in connection with the right ear."

— The Boston Board of Health last week issued new quarantine regulations. Hereafter vessels coming from infected ports, or having on board infected cargoes, are to remain at the quarantine station until released by the port physician, who is given full powers in the matter, and the cargo is to be disinfecting in the storehouse on Galloup's Island, cases of illness being attended to in the hospital there, as before.

— Prof. Henry W. Acland, of Oxford, has been made a Companion of the Order of the Bath.

— Professor Jaccoud has been transferred from the chair of Internal Pathology in the Paris Faculty of Medicine to that of Clinical Medicine made vacant by Professor Laségue's death.

NEW YORK.

— On the 21st of October a reception was given at the Mount Sinai (Jewish) Hospital to afford its friends an opportunity of examining a number of improvements which have been made in the institution during the last eighteen months. Among these have been the erection of eye and ear infirmaries and an isolated building for cases of contagious disease occurring in the hospital. The inner walls of the main building have also been renewed in order to guard against the danger of absorption of infectious matter, and the

¹ Lehrbuch der Psychiatrie.

² Die Mania.

total cost of the improvements is about \$60,000. The institution now contains 168 beds, and two new perpetual beds have recently been founded by wealthy Hebrews.

—The ninth annual meeting of the Board of Relief of the United Hebrew Charities was held October 28th, when the president, Mr. Henry Rice, made a report of the work done by the Board, and recommended, among other suggestions in regard to its future work, that a medical graduate and a trained nurse should be employed to devote their whole time to labor among the outside poor, caring for the sick, inspecting dwellings, and teaching the necessity of cleanliness and ventilation and other laws of hygiene.

—The Board of Managers of the New York Infant Asylum recently obtained a temporary injunction, with an order to show cause why it should not be made permanent, against the Board of Health of the town of East Chester (which had been investigating the condition of the branch of the asylum located at Mount Vernon, West Chester County), restraining them from interfering in the management of the sanitary and medical affairs of the institution. The case was set down for argument before Justice Dykman, at White Plains, on the 29th of October, when the latter rendered a decision to the effect that the injunction should be made permanent, thus denying the right of the Board of Health to interfere. In case of an epidemic, such, possibly, as that of measles and diphtheria, which had been in progress at the asylum, he said, the Board had the power to quarantine the institution so as to prevent the spread of disease, but not to do anything more. If there was any mismanagement in the care of the inmates the Board could act only through an indictment or civil suit.

—Dr. C. Fayette Taylor and his partner, who have a private orthopædic hospital on a corner of Sixth Avenue where the elevated railway passes on two sides of the institution have won a suit against the Metropolitan and Manhattan Elevated Railroad Companies in the Superior Court, the jury granting them \$20,000 out of the \$25,000 which they claimed. This was the second trial, the jury in the first trial having failed to agree. The plaintiffs sought to recover damages for depreciation of property and injuries to their business, they having leased the property before the road was built, and they claimed that the trains injured their business on account of the dirt, noise, foul gases, and obstruction of light and air consequent upon running them. The defense held that the roads were legally built, and were a public necessity.

—A tramp, who had recently been sleeping in lodging-houses in various parts of the city, having died of typhus fever on the 29th of October, Dr. Jones, the assistant sanitary superintendent, instituted an immediate and rigid inspection of all the places frequented by this class of persons in order to prevent the occurrence of an outbreak of the fever among them.

—One of the passengers of the Cunard steamship *Scythia*, which arrived on the 31st of October, having

been attacked with small-pox during the voyage, the vessel was detained at quarantine until she had been fumigated and all her passengers vaccinated.

—The Hudson County (N. J.) Grand Jury, on making a recent visit of inspection to the Passaic River found that nearly all the main sewers of the city of Newark emptied into the river, and that the tide carried the sewage some distance above the pumping station at Belleville, where the water is pumped into mains by which Jersey City is supplied. It is probable that in consequence of this the Grand Jury will indict the city of Newark for maintaining a nuisance.

—An epidemic of diphtheria broke out in the State Institution for the Blind at Batavia, N. Y., on the 19th of October, and three of the cases have thus far proved fatal. The institution has consequently been closed, and as many of the pupils as possible sent to their homes.

—During the month of October 2567 deaths and 2790 births were reported in New York. The deaths from contagious diseases were as follows: measles, 23; scarlet fever, 32; diphtheria, 78; typhoid fever, 87; typhus fever, 2; and cerebro-spinal meningitis 17.

—Sir William MacCormack, F. R. C. S., has lately been in town, and has been the recipient of considerable attention. On Thursday evening, October 25th, Dr. J. Marion Sims and his son, Dr. H. M. Sims, gave a large and elegant reception in his honor.

Miscellany.

THE MISTAKEN DIAGNOSIS IN THE CASE OF THE COMTE DE CHAMBORD.

M. VULPIAN has published an account of the symptoms in the final illness of the late Comte de Chambord, which explains the uncertainty in the diagnosis and the final adoption of that of cancer which was negatived by the autopsy. *L'Union Médicale* (September 18th) contains a résumé of this article, by which it appears that the symptoms pointing to digestive impairment dated from early in June, soon followed by the detection of an epigastric tumor. Vulpian was called in consultation in July, and after a second examination in presence of all the attendants the following diagnosis was made: Cancer of the stomach *en plaque* at some distance from the pylorus; fatty degeneration of the heart; atheroma of the arteries; slight interstitial nephritis. What determined them toward the diagnosis of cancer was, besides the epigastric tumor, which was deep, large, painful, to the right of the median line, ill-defined, and of the size of the palm of the hand, the fact that ingestion of food caused, after five or ten minutes, pain, with vomiting, the latter also occasionally occurring before breakfast. No blood was ever ejected. The patient's uncle had died of cancer of the stomach.

A milk diet caused an amelioration of the symptoms, so that there was some doubt of the diagnosis, but death occurred August 24th. The autopsy was only partial, being such as could be made incidentally to the process of embalming. The tumor was found to consist of thickened fatty mesentery, with a great number of hypertrophied and inflamed lymphatic ganglions,

non-cancerous. Localized peritonitis, hypostatic congestion of the right lung; heart of the color of a dead leaf, flabby, no valvular lesions, atheromatous patches in the aorta. The principal lesion, which caused the most surprise, was in the lower fifth of the œsophagus; several ulcerations of variable size were found here. They had destroyed all the mucous membrane, and had exposed the muscular coat; edges perpendicularly cut or beveled, some showing evidence of commencing cicatrization; nothing in the upper part of the œsophagus. The stomach showed the appearance of chronic catarrh; near the pylorus were some little ulcerations, only one of which looked like those of the œsophagus. M. Vulpian, while of course admitting the error of diagnosis, considers it excusable under the evidence, and indeed says that with the same signs he should make the same diagnosis again.

THE ELASTIC RESPIRATOR IN THE TREATMENT OF DYSPNŒA IN THE EMPHYSEMATOUS.

PROF. BAZILE FÉRIS, considering the dyspnœa associated with emphysema the most painful and troublesome symptom of the disease, has devised an apparatus which he terms the "elastic respirator", to render breathing deeper and easier. The chief cause of the dyspnœa is loss of elasticity in the alveolar walls, the chest being fixed in the inspiratory position; any therapeutic resource therefore which will facilitate expiration, or restore to the lung its lost elasticity, will abolish the dyspnœa. The apparatus designed by the author is extremely simple and light. It resembles exactly a double hernia truss: from a pad situated between the shoulders, the two limbs of the truss pass round under the arm-pits to the terminal pads in front, which are rather larger and thinner than those of a hernia truss. Light straps passing over the shoulders keep the pads in position. The parts at which these pads should be made to exercise pressure are the least resistant parts of the thoracic wall, usually the upper and anterior part of the chest, over the cartilages and the ends of the ribs. The first effect of the pressure so applied is to drive out the air from the chest, that is, expiration is effected; inspiration then follows without any effort, as the inspiratory muscles are not enfeebled, but have rather increased in volume; then again artificial expiration, and so on. The increased movement by the chest wall so obtained was clearly shown in some tracings taken by M. Constantine Paul.

The actual practical results obtained by M. Férís, in the treatment of thirteen cases of emphysema, were very striking. The relief to the dyspnœa was as a rule instantaneous; patients could walk, go up and down stairs, sometimes even run with little fatigue. One patient was so much improved that he left the hospital without his respirator; he had not gone three hundred yards, however, till he came to a stand-still, and had to return to the wards leaning on the arm of an attendant; then, having put on his respirator again, he went out in comfort, and did not return for seven hours. Four very striking and successful cases are recorded in detail.

The author's account of the benefits derived from using his apparatus is still further confirmed by experiments with the spirometer; it was found that breath-

ing easily with the respirator in position the volume of air respired was nearly double that respired without the apparatus. Another point worthy of notice is that not only does this respirator deepen and facilitate respiration, but it diminishes the rapidity of the respiratory movements. In the aged, in whom the chest wall is more rigid, and in cases where the emphysema is complicated by extensive bronchitis, the relief is less striking than in the opposite conditions. — *Bull. Gén. de Thérap.*, August 15, and *Glasgow Medical Journal*, September, 1883.

TYPHOID FEVER IN CONNECTICUT.

THE Secretary of the Connecticut Board of Health reports for August that "the prevalence of typhoid fever is the most important element in the sanitary history of the month, when the relative prevalence of this type of disease and malarial diseases are considered. A few years ago scarcely a case was reported from the malarial region; now the cases begin to exceed the malarial, and in places like Manchester, where the two types exist together, the influence is seen in the prevalence of typho-malarial fever. Two fatal cases of this form are reported from South Manchester, and several cases of typhoid fever. The use of a small stream for the disposal of sewage, which is obstructed by numerous dams, thus causing beds of deposits, which from the natural effects of the dry season must have been more or less uncovered and exposed to the sun, furnishes favorable conditions for the causation of typho-malarial fever. This has been repeatedly illustrated in different places. These same agencies would favor the spread of typhoid fever were the malarial influence wanting. The general decrease in the prevalence of malaria and the malarial influence upon other diseases is very marked, in a large part of the territory, where they have been for quite a long period the governing type. With a few exceptions, which tend to strengthen the idea that there must be some local causes to induce the unusual prevalence, I cannot learn of any general activity in the progress or spread of malaria. While there is a much greater prevalence and a more marked influence over other diseases in the northeasterly frontiers of the region that has already been invaded by malaria, there is no such decided prevalence as exists in the region about Manchester. As has been stated acute-intermittent is very common, and both typho-malarial and malarial fevers exist. In the present uncertainty as to the ultimate nature of malaria, all such manifestations are of peculiar interest.

"The cases reported from Hampton this month and previously were imported by a gang of Italian laborers. A few cases of typho-malarial are reported in August, also typhoid fever, the latter indigenous.

The prevalence of typhoid fever is noticeable in Waterbury; in New Hartford, Thomaston, and several places in Litchfield County; in a part of Killingly, and in several towns in Windham County. More or less cases of typhoid fever are reported also from different parts of every county.

A SEVENTH SENSE.

SIR WILLIAM THOMSON, the eminent Professor of Mathematics in the University of Glasgow, according

to the *British Medical Journal*, in his inaugural address, delivered last week, as President of the Midland Institute, at Birmingham, broached the idea of the existence of a magnetic sense. This sense he called the seventh sense, to distinguish it from our other six senses — namely, those of sight, hearing, taste, smell, heat, and force. He said that, in speaking of a possible magnetic sense, he in no way supported that wretched, groveling superstition of animal magnetism, spiritualism, mesmerism, or clairvoyance of which they had heard so much. There was no seventh sense of a mystic kind. Clairvoyance, and so on, was the result of bad observation, chiefly, somewhat mixed up with the effects of willful imposture, acting on an innocent and trusting mind. If there were not a distinct magnetic sense, it was a very great wonder that there was not. The study of magnetism was a very recondite subject. One very wonderful discovery that was made in electric magnetism was made by Faraday, and worked out very admirably by Foucauld, an excellent French experimenter, showing that a piece of copper, or a piece of silver, let fall between the poles of a magnet, would fall down slowly, as if through mud. Was it conceivable that, if a piece of copper could scarcely move through the air between the poles of an electric magnet, a human being or living creature, in the same position, would experience no effect? Lord Lindsay got an enormous magnet, so large that the head of any person wishing to try the experiment could get well between the poles; and the result of the experiment was marvelous, the marvel being that nothing was perceived. Sir William Thomson, however, was not willing to admit that the investigation was completed. He could not but think that the quality of matter in the air, which produced such a prodigious effect on a piece of metal, could be absolutely without any perceptible effect whatever on a living body. He thought the experiment was worth repeating; and it was worth examining whether or not an exceedingly powerful magnetic force was without perceptible effect on a living vegetable or animal body. His own speculations had led him to conclude that there might be a seventh or magnetic sense; and that it was possible an exceedingly powerful magnetic effect might be produced on living bodies that could not be explained by heat, force, or any other sensation.

CULTURE AND NATURE.

MR. SPENCE BATE, F. R. S., in a recent address called attention to an inverse ratio which he believed to exist between the development of the cranium and that of the teeth. The teeth of Esquimaux, Red Indians, natives of Ashantee, as well as some specimens from primeval man, were shown to be more perfect than most of those from modern Europe, the latter presenting so-called interglobular spaces which are wanting in less civilized races, and in the rare instances of perfect teeth found among highly developed peoples. Not only the dentine, but also the enamel, is said to be deteriorating. In gross appearance, too, as well as histologically, the teeth are changing. Mr. Bate believes that the tendency for the cranium to develop at the expense of the face and lower jaw is marked as we ascend the scale of the vertebrates. As

the jaw atrophies, there is less space for the growth and play of the teeth. It is certainly an apparent fact that in vertebrate evolution the tendency is to the disappearance of teeth. The lower vertebrates are said to have four molars on each side in each jaw, the higher three, while man has but two.

The *London Spectator*, commenting on these facts, says: The facts being granted, the question arises whether these symptoms will end in a decay of the race, or in an extinction of each cultivated class as it springs up, the learned perishing while the barbarians below them flourish. The latter is the more probable, for nature seems opposed to the steady transmission of high brain power. Genius does not breed; and families over cultivated for their physique have long been known to tend either to sterility, to insanity, or to decrepitude. It may be found yet that the hopes of Comte are exactly opposed to the conclusions of science, and that a race, after developing its force, as, for instance, the Chinese did, can only be saved by becoming strictly non-progressive. Humanity may continue only on condition of its healthy barbarians always rising to the top. The professor may rule the costermonger, but the costermonger's progeny will always survive the professor's.

THE NATURAL HISTORY OF DYSMENORRHEA.

DR. JOHN WILLIAMS, of London, has recently written a paper on the above subject, which is reviewed at some length in the *Lancet* (September 15th). We extract the following, which are the author's general conclusions: —

"(1.) Dysmenorrhœa should be studied first under the least complex conditions — in single women. (2.) Dysmenorrhœa in single women is rarely acquired; it is almost invariably primary, namely, it appears with the menstrual function. (3.) Dysmenorrhœa in a few, but rare, cases, ceases spontaneously a few years after puberty. (4.) Marriage, if sterile, aggravates the disorder in many cases; it is only very seldom that it relieves the pain. (5.) Child-bearing cures a large number of cases, and it is not impossible that were all puerperal complications excluded it would cure every case. (6.) The proportion of sterile to fertile women subjects of primary dysmenorrhœa is one to twelve. (7.) Menstruation begins in women who become sufferers from primary dysmenorrhœa at about the estimated average age for the appearance of the function in London. (8.) Menstruation is regular in about two thirds of the cases, and irregular in about one third. (9.) The menstrual fluid is profuse in about two fifths of the cases, scanty in about one half. It contains clots or shreds in about three fourths. (10.) The changes which take place in the fluid in the course of dysmenorrhœa are various, and cannot at present be classified. (11.) The uterus is imperfectly developed. It may be too short, or too small in volume, or it may be defective in both respects. The cervix may be conical and the os small and round, but stricture of the canal in any part of its course is infinitely rare. (12.) The changes in the uterus due to dysmenorrhœa are slight hypertrophy, erosion and eversion of the mu-

cous membrane of the cervix, and catarrh. The cavity increases but little in length, for after years of suffering it measures rarely more than two and a half inches in length. In the early stages the tissues of the uterus are in some cases soft; in the more advanced, hard. (13.) The hypertrophy of the uterus is probably the result of periodically increased muscular action. (14.) Ovaritis and perimetritis are possible consequences of dysmenorrhœa. (15.) The menstrual pain is the result of spasm of the uterus, excited by the separation and expulsion of shreds of decidua and clots, in an organ whose sensitiveness in the performance of its function is enhanced by inappreciable conditions of tissue dependent on imperfect development, often associated with others, such as anæmia."

DIAGNOSTIC VALUE OF UTERINE HÆMORRHAGE AFTER THE MENOPAUSE.

DR. T. GAILLARD THOMAS, in a recent clinical lecture on malignant disease of the neck of the womb,¹ stated as an axiom in gynæcology, that if a woman who has normally ceased to menstruate begins to have uterine hæmorrhage one should always suspect carcinoma. "Not infrequently you will see in the medical journals the reports of cases where women who have passed the change of life have begun to menstruate regularly again, but such accounts are altogether deceptive, and if these cases could be followed out it would be found, with scarcely a single exception, that the uterine flow was merely the indication of the presence of malignant disease. In other words, there is absolutely no such thing as a return of the menses when a woman has once reached the normal menopause. Not long since a patient of mine in the Woman's Hospital, who is sixty years of age, began to have a flowing from the uterus, and as there was no indication of any external disease I applied the curette to the endometrium, and drew out some pulpy masses, which I sent to a well-known microscopist for examination. The report that I got from him was that the growth was not malignant in any respect, but was simply a form of polypus. I am perfectly sure, however, that the microscopist is wrong, and for this reason, in the uterus of a woman of sixty polypi never develop. The organ at that age is completely atrophied. Sometimes in women who have passed the menopause you will find uterine tumors which have all the appearance of fibroids. They are not by any means fibroids, however, but sarcomata."

THE TREATMENT OF MEASLES.

DR. D. MACLEAN, of Edinburgh, in the *Lancet* (October 13th), after referring to the disastrous results sometimes met with in individual cases of measles, and the fatal epidemics which have occasionally visited communities long exempt, thereby attacking an unusual number of adults, says regarding treatment:—

"As this disease is considered one of the zymotic class we have in its treatment to consider principally two things: (1) the management of the ferment or whatever it is, and (2) the management of the effects

of this ferment upon the system. The most marked of these latter present themselves to us in the effects of the ailment upon the mucous membranes. The greatest action of the disease, as we all know, is upon the mucous membrane of the lungs, and it is from its action there we have the immediate cause of the ensuing death or the prolonged ill health afterwards. We have thus clearly set before us the line of action to follow: (1) to relieve the congestion of the mucous membrane, which is the immediate cause of danger, and (2) to destroy or reduce the violence of the disease itself. This I have been in the habit of doing, I believe successfully, by giving (say to a child of two or three years of age) a teaspoonful in water of the following mixture every three hours: ipecacuanha wine, half a drachm; syrup of squills, half an ounce; quinine, two grains; acetate of ammonia solution to two ounces. Of course the quinine is increased according to age. We have thus in this mixture a stimulating expectorant and diaphoretic to relieve the tension in the mucous membranes and the skin, and also in the quinine a specific to destroy or abate the violence of the primary ferment. It may be necessary to add to or modify the form in which this plan of treatment is carried out, as when the irritation and cough are persistently great, then the addition of a little tincture of hyoscyamus is all that is necessary. So with the quinine; sometimes the stomach is so irritable that it is necessary to omit it from the mixture; but as it is essential that it be introduced into the system for the destruction of the ferment it can be administered separately by giving it in powder mixed with saccharated carbonate of iron, which diminishes the irritant action of the quinine that takes place when the drug is given alone.

"This form of treatment for measles is good in all types of the disease, whether the attack be mild or severe, and more especially valuable when we have that dangerous form in which the eruption is of a deep-purplish color, a form which is generally recognized as being the most fatal. This style of treatment I have followed for a number of years. I have seen many cases, and, as a justification for submitting it to the notice of the profession, I do not remember having signed a certificate of death for either the disease itself or its effects."

ADMINISTRATION OF QUININE.

THE following summary gives the pith of notes on the administration of quinine contributed by Dr. David Young, of Rome, to the *London Practitioner*:—

(1.) Never to give quinine in antipyretic doses in cases where the bowels are confined and the secretion of urine is scanty.

(2.) In cases where it is being administered and an increase of dose is desirable, this may be safely done if the skin, bowels, and kidneys maintain their normal functional activity.

(3.) In many cases of remittent and intermittent fevers the combination of the drug with chloride of ammonium or a salt of potash or soda is likely to be more easily tolerated, as well as more useful, than if it be administered in a pure form.

(4.) During the administration of quinine should a headache come on or increase in intensity the case requires the most careful attention.

¹ New York Medical Journal, September 1, 1883.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 27, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Con-sumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,306,590	541	204	33.08	16.19	5.15	3.50	6.81
Philadelphia.....	846,984	338	117	23.20	16.82	1.74	4.22	9.57
Brooklyn.....	566,689	214	76	19.92	14.94	7.06	1.25	5.81
Chicago.....	503,304	176	69	21.00	10.26	2.85	1.14	10.83
Boston.....	362,535	158	52	24.57	12.60	6.27	3.99	9.12
St. Louis.....	350,522	138	54	35.04	11.68	6.57	.73	17.52
Baltimore.....	332,190	171	69	26.68	11.60	4.16	2.32	15.84
Cincinnati.....	255,708	68	21	19.11	7.35	5.88	2.94	1.47
New Orleans.....	216,140	130	45	29.22	15.38	10.00	1.53	1.53
District of Columbia.....	177,638	52	23	19.20	19.20	7.68	3.84	1.92
Pittsburg.....(1883)	175,000	56	19	28.16	11.32	1.76	3.52	21.12
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	30	16	3.33	20.00	3.33	—	—
Providence.....(1883)	116,755	47	13	25.56	12.78	8.52	12.78	2.15
New Haven.....(1883)	73,000	26	6	25.95	15.40	3.85	7.70	—
Charleston.....	49,999	46	16	21.74	10.87	10.87	4.34	6.51
Nashville.....	43,461	15	2	6.66	33.33	—	—	6.66
Lowell.....	59,485	21	6	14.28	19.04	4.76	—	—
Worcester.....	56,295	23	11	26.10	8.70	13.05	—	8.70
Cambridge.....	52,740	15	6	26.66	20.00	6.66	6.66	13.33
Fall River.....	49,006	17	8	23.52	11.76	17.64	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	11	3	9.09	9.09	—	—	—
Springfield.....	33,340	10	5	30.00	10.00	10.00	20.00	—
Salem.....	27,598	18	0	25.00	25.00	—	12.50	12.50
New Bedford.....	26,875	11	5	18.18	27.27	9.09	—	9.09
Somerville.....	24,985	10	2	30.00	20.00	—	10.00	20.00
Holyoke.....	21,851	10	4	—	40.00	—	—	—
Chelsea.....	21,785	5	0	—	33.33	—	—	—
Taunton.....	21,213	3	1	—	66.66	—	—	—
Gloucester.....	19,329	4	2	25.00	25.00	—	—	—
Haverhill.....	18,475	—	—	—	—	—	—	—
Newton.....	16,995	5	1	—	40.00	—	—	—
Brockton.....	13,608	—	—	—	—	—	—	—
Newburyport.....	13,537	4	2	—	—	—	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	2	1	—	—	—	—	—
Twenty-three Massachusetts towns..	178,881	47	12	—	14.91	—	—	—

Deaths reported 2412 (no report from Buffalo): under five years of age, 871: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 603, consumption 350, lung diseases 202, diphtheria and croup 196, diarrhoeal diseases 127, typhoid fever 77, scarlet fever 51, malarial fevers 42, whooping-cough 22, cerebro-spinal meningitis 16, measles 12, small-pox eight, puerperal fever eight, erysipelas four. From *scarlet fever*, Philadelphia 10, New York nine, Baltimore seven, Brooklyn and St. Louis six each, Chicago five, Boston four, New Orleans, Pittsburg, Worcester, and New Bedford one each. From *malarial fevers*, New York and New Orleans 11 each, St. Louis eight, Brooklyn five, Baltimore, and New Haven three each, Chicago one. From *whooping-cough*, New York seven, Philadelphia four, Brooklyn, Chicago, New Orleans, and District of Columbia two each, Boston, Cincinnati, and Lynn one each. From *cerebro-spinal meningitis*, New York four, Philadelphia, Chicago, and Cincinnati three each, Lowell two, Providence one. From *measles*, New York eight, Philadelphia, New Orleans, District of Columbia, and Gloucester one each. From *small-pox*, New Orleans six, Philadelphia two. From *puerperal fever*, Philadelphia, Baltimore, Cincinnati, two each, Brooklyn and New Haven one each. From *erysipelas*, New York three, Philadelphia one.

Thirteen cases of small-pox were reported in St. Louis; scarlet fever 52, typhoid fever 27, and diphtheria 25 in Boston; scarlet fever 15, and diphtheria five in Milwaukee.

In 39 cities and towns of Massachusetts, with an estimated population of 1,015,703 (estimated population of the State 1,922,530), the total death-rate for the week was 18.69 against 19.34 and 18.53 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending October 13th, the death-rate was 20.2. Deaths reported 3333: acute diseases of the respiratory organs (London) 248, diarrhoea 171, scarlet fever 116, measles 56, fever 56, whooping-cough 45, diphtheria 32, small-pox (London three, Birmingham and Sunderland two each, Newcastle one) eight. The death-rates ranged from 11.7 in Leicester to 32.3 in Preston; Sheffield 16.3; Birmingham 17.7; Bradford 18.9; London 19; Bristol 19.6; Nottingham 22.8; Liverpool 23.6; Leeds 26; Manchester 27.2. In Edinburgh 17; Glasgow 21.7; Dublin 25.8.

For the week ending October 6th, in 171 German cities and towns, with an estimated population of 8,731,018, the death-rate was 22.9. Deaths reported 3843; under five years of age, 1988; consumption 476, diarrhoeal diseases 296, lung diseases 267, diphtheria and croup 224, scarlet fever 116, typhoid fever 77, whooping-cough 67, measles and röteln 46, puerperal fever 28. The death-rates ranged from 10.8 in Wiesbaden to 33.5 in Halle; Königsberg 32.2; Breslau 31.1; Munich 28.2; Dresden 22.2; Berlin 24.6; Leipzig 17.2; Hamburg 19.3; Cologne 25.2; Frankfurt a. M. 17.8; Strasburg 20.6.

For the week ending October 13th, in the Swiss towns, there were 32 deaths from consumption, diarrhoeal diseases 26, lung diseases 13, whooping-cough 11, typhoid fever seven, small-pox one, scarlet fever one, diphtheria one. The death-rates were, at Geneva 20.5; Zurich 12; Basle 20.6; Berne 20.3.

The meteorological record for the week ending October 27th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps:—

[Date.	Barom-eter.	Thermome-ter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.				Mean.				Mean.			Mean.			Mean.			Duration. Hrs. & Min.	Amount in Inches.
Oct., 1883.		Daily	Mean.	Maximum.	Minimum.	7.23 A. M.	8.23 P. M.	11.23 P. M.	Daily	7.23 A. M.	8.23 P. M.	11.23 P. M.	7.23 A. M.	8.23 P. M.	11.23 P. M.	7.23 P. M.	8.23 P. M.	11.23 P. M.		
Sun., 21	30.373	38	42	36		72	73	74	73	N	N	N	11	9	9	O	O	C	—	—
Mon., 22	30.417	37	44	32		74	61	89	75	NW	E	O	10	9	0	O	C	C	—	—
Tues., 23	30.397	40	48	29		89	68	93	81	NW	E	NE	7	9	9	O	C	R	—	—
Wed., 24	30.088	40	48	35	100	100	100	100	100	NE	N	N	16	21	20	R	R	R	—	—
Thurs., 25	30.053	43	49	36		89	77	88	85	NW	SE	NE	6	4	5	F	O	O	—	—
Fri., 26	30.039	42	48	38		93	93	95	94	N	NE	NW	6	3	11	F	R	O	—	—
Sat., 27	30.073	45	50	37		96	93	100	96	NW	NE	S	7	4	3	O	O	O	—	—
Mean, the Week.	30.206	41	50	29					86										38.35	2.47

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; L., thunder storm.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 26, 1883, TO NOVEMBER 2, 1883.

MOORE, JOHN, lieutenant-colonel and assistant medical purveyor. To be relieved from duty as medical director, headquarters Department of the Columbia, to proceed to San Francisco, California, and assume charge of the medical purveying depot in that city. Paragraph 10, S. O. 243, A. G. O., October 24, 1883.

McKEE, JAMES C., major and surgeon. Relieved from duty in the Department of California, and assigned to duty as medical director, Department of the Columbia. Paragraph 5, S. O. 249, A. G. O., October 31, 1883.

WOLVERTON, WILLIAM D., major and surgeon. Granted leave of absence for one month. Paragraph 6, S. O. 201, Department of the East, October 24, 1883.

MERRILL, J. C., captain and assistant surgeon. Granted leave of absence for one month. Paragraph 7, S. O. 201, Department of the East, October 24, 1883.

ERRATUM.—In the article in the JOURNAL of November 1st, on Kairin, by Dr. George B. Shattuck, the sentence at the top of page 415, second column, should read: "It is now sold for \$3.75 an ounce, and I believe that the process employed for its preparation may with an increasing demand be so improved as to allow it to be sold at a much cheaper rate, and make it considerably cheaper than quinine."

OBITUARY.—Died, at East Douglas, Mass., October 29, 1883, Alba Enoch Kemp, M. D., M. M. S. S., aged sixty-one years.

SUFFOLK DISTRICT MEDICAL SOCIETY.—The Section for *Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, November 14th, at 7.45 o'clock. The following papers will be presented: Dr. G. H. Lyman, *Tinnitus Aurium and Vertigo as Prominent Symptoms of Lithæmia*. Dr. J. J. Putnam, *Recent Views concerning the Diagnosis and Treatment of Lithæmia*. Drs. S. G. Webber and David Hunt will open the Discussion. Dr. A. F. Holt, Medical Examiner for Middlesex, *Sudden Death by Hæmorrhage from the Hepatic Vein*. Drs. F. A. Harris and F. W. Draper, Medical Examiners for Suffolk, will open the discussion.

ALBERT N. BLODGETT, Secretary.

BOOKS AND PAMPHLETS RECEIVED.—Chemistry. Inorganic and Organic. By Charles Loudon Bloxam, Professor of Chemistry in King's College, London. New American, from

the Fifth London, Edition, thoroughly revised and much improved. Philadelphia: Henry C. Lea's Son & Co.

Transactions of the New Hampshire Medical Society at its Ninety-Third Annual Session, held at Concord, June 19 and 20, 1883.

The Treatment of Wounds as based on Evolutionary Laws By C. Pittfield Mitchell, M. R. C. S., etc. New York: J. H. Vail & Co. 1883.

Diagnosis of Ovarian Tumors. Lectures delivered by Edward Borch, A. M., M. D., Professor of Surgery, etc., etc. St. Louis, Mo. 1883.

Delayed and Non-Union of Fractures. By N. Senn, M. D., Milwaukee, Wis. (Reprint from the Weekly Medical Review of September 29, 1883, Chicago and St. Louis, 1883.)

How to be Weatherwise. A New View of our Weather System. By Isaac P. Noyes. Second Edition. New York: Fowler & Wells. 1883.

The Antiseptic Treatment of Typhoid Fever. By G. C. Smythe, A. M., M. D., Professor of Principles and Practice of Medicine, Indianapolis. Read before the Medical Society of the Mississippi Valley, September 19, 1883.

Alcoholic Insanity. By Lewis D. Mason, M. D. (Reprint.) Cruise of the Revenue Steamer Corwin in Alaska and in the Northwest Arctic Ocean in 1881. Notes and Memoranda, Medical and Anthropological, Botanical, Ornithological. Washington. 1883.

Quarterly Report of Medical Officers, United States Army, with their Stations and Duties, October 1, 1883. Washington: Surgeon-General's Office.

Water Pollution. Wells. By Irving A. Watson, M. D., Secretary New Hampshire State Board of Health. (Reprint.)

An Ethical Symposium. Being a Series of Papers Concerning Medical Ethics and Etiquette from the Medical Stand-point. By Drs. Post, Ely, Vanderpoel, Pilcher, Hun, Wey, etc., etc. With an Appendix. New York: G. P. Putnam's Sons. 1883.

The Climatic Treatment of Pulmonary Consumption. By Charles Denison, M. D., Denver, Colorado. (Reprint.)

Transactions of the New York Medico-Chirurgical Society, 1882. Vol. II.

Divorce in Massachusetts. An Extract from the Forty-First Registration Report. By Frank Wells, M. D.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M. A., M. D., LL. D., Professor of Materia Medica and General Therapeutics in the Jefferson Medical College of Philadelphia. Fifth Edition, Revised and Enlarged. New York: D. Appleton & Company. 1, 3, and 5 Bond Street. 1884.

The Law of Sex, being an Exposition of the Natural Law by which the Sex of Offspring is controlled in Man and the Lower Animals, and giving the Solution of Various Social Problems. With Forty Illustrative Portraits. By George B. Starkweather, F. R. G. S. London: J. & A. Churchill. 1883.

The Pathology and Treatment of Venereal Diseases. By Freeman W. J. Bumstead, M. D., LL. D., and Robert W. Taylor, A. M., M. D. Fifth Edition. Revised and Rewritten, with many additions, by Dr. Taylor. Philadelphia: Henry C. Lea's Son & Co. 1883.]

Lectures.

ON THE TREATMENT OF DIABETES.¹

A CLINICAL LECTURE BY PROFESSOR DUJARDIN-BEAUMETZ.

Member of the Academy of Medicine, Physician to the Hôpital St. Antoine, etc., Paris, France.

GENTLEMEN, — Diabetes² is a very common affection which you will often be called upon to treat when you shall have entered upon your practice; I propose therefore to devote one or two lectures to the therapeutics of this disease. So frequent, in fact, is this complaint, that Bouchardat affirms that out of every twenty men between forty and sixty years of age, and pertaining to the wealthier classes, you are sure to meet with at least one diabetic patient.

Whence comes this really large number of glycosuric patients? It results first of all from the fact that we are better acquainted with the affection, and, moreover, with the conditions of modern life, which in exciting unduly the digestive functions and those of the cerebro-spinal axis, predispose notably to this disease. There is, then, a preponderating interest in knowing the therapeutic rules which ought to be observed in such cases, especially since, when these rules are followed, they cause disappearance of sugar from the urine, and all the troubles which arise from glycosuria. But before entering upon the main part of my subject there are two preliminary questions which must be decided: the pathogeny of diabetes, and the tests which determine the presence of sugar in the urine.

Pathogeny plays an important part in the therapeutics of diabetes; it constitutes ætiological therapeutics, and we cannot discuss scientifically the influence of medicaments and medications till we have examined the mechanism of glycosuria. Thanks to the brilliant researches of Claude Bernard, researches which con-

¹ Translated from advance sheets for the Boston Medical and Surgical Journal by E. P. Hurd, M. D., Newburyport, Mass.

² Cantani has given a full history of diabetes, which he divides into four periods: —

The first, which commences with Aretæus and Galen, and during which the presence of sugar in the diabetic urine was unknown.

The second, which commences with Willis, and in which the symptomatology of diabetes was accurately established.

The third, which is associated with the name of Rollo, who, more than any of his predecessors, pursued a practical end while discussing with more method than they certain theories which were largely adopted.

The fourth, which commences with Claude Bernard, and in which diabetes is studied by the aid of the experimental method from the standpoint of pathogeny and therapeutics at the same time.

Diabetes was known from the most remote antiquity by the physicians of India, where it was described under the name of *sweet urine*, or urine of honey. In two books translated from the Sanskrit diabetes is called *madume'hé*, which means *urine of honey*.

The ancients knew little about diabetes, at the same time Cornelius Celsus mentions it, and Aretæus gave it the name of *diabetes*, from the Greek word *διαβαίνω*, implying that the sweet drinks of persons so affected passed through the body unchanged.

Galen also considered diabetes as a disease of the kidneys attended with elimination of sweet beverages unaltered, and these ideas were adopted by Willis. Moreover, Vittorio Trincavella in support of the Galenic notions cites a case where the urine of a diabetic patient had the same taste as the drinks which he imbibed. During this period Paracelsus alone took a stand against this theory of Galen, and affirmed that the cause of diabetes was in the blood and not in the kidneys.

In 1675 Willis detected sugar, or rather honey, in the urine, and thenceforth the symptoms of this disease came to be better known. Sydenham thought that it was a disease of malassimilation, and Dobson proved by the fermentation test the presence of sugar not only in the urine but in the blood. Lastly, Rollo inaugurated the dietetic treatment of diabetes, which hygienic regime has been crowned by the labors of Bouchardat dating from 1841; and within the present epoch Claude Bernard has given to the world his valuable discoveries concerning glycæmia and the glycogenic functions of the liver. (Cantani on Diabetes. Paris, 1876.)

stitute, perhaps, his best title to glory, we know to-day what is the origin of the sugar which is found in the normal state in the blood of animals.³

This physiological glycæmia has two origins: either it is a fact of alimentation; the feculents and cane sugar being transformed into glucose by the intestinal juice, the salivary diastase, and by the pancreatic juice constitute the first of these sources, or else it is a product of the glycogenic functions of the liver. Claude Bernard has in fact shown us that there exists in the liver an animal amyloid principle, glycogen,⁴ and that this starchy principle under the influence of an hepatic ferment furnishes glucose. Notwithstanding the vehement attacks which Pavy⁵ and Lussana have made upon the doctrine of the normal glycogenic action of the liver, pretending that this sugar formation was simply a pathological or post-mortem phenomenon, the views of Claude Bernard are none the less admitted by the majority of physicians.

Rouget, on his part, generalizing the glycogenic functions, has strongly maintained that all parts of the body, and particularly the muscles, possess glycogenic properties. But we are not obliged to enter into the discussion of all these objections; it suffices us to know that glycosuria, or the passage of sugar in the urine, is the exaggeration of a normal phenomenon, physiological glycæmia, that is to say, the presence of glucose in the blood. The conditions which, exaggerating this physiological glycæmia, transform it into a persistent glycosuria are numerous; and according as they have been exclusively adopted to explain the mechanism of diabetes, a great many theories have been proposed.⁶

³ Claude Bernard has dwelt particularly on the origin of the glucose which is found in the blood. This glycæmia comes from two sources — from alimentation, and from glycogen formed in the liver.

The glucose furnished by food is a product of the digestion of amylaceous matters by saliva and the pancreatic juice, and also of saccharine articles of diet which are transformed from saccharose into glucose by the action of the intestinal juice; this juice contains a ferment which Claude Bernard calls *invertase ferment*. The rôle of the liver in this case is said to be that of a reserve-depot for this alimentary sugar, and to supply it to the blood in proportion as it is required. The glycogen or animal starch (which forms a singular explosive substance with nitric acid, takes a violet color with iodine, and passes to the state of dextrine) in presence of a hepatic ferment is transformed into glucose.

Claude Bernard insists that the formation of sugar in the liver is a normal fact. The liver, then, is the seat of two orders of phenomena — phenomena of assimilation, and phenomena of disassimilation. The first correspond to the formation of glycogen, the latter to its transformation into dextrine and glucose. The more active the life, the more pronounced the phenomena of disassimilation. (Claude Bernard on Diabetes and Glycogenesis, in *Revue des Cours Scientifiques*, 1873.)

⁴ Glycogen is a hydrocarbonaceous substance isomeric with starch; has for formula $C^6H^{10}O_6$; dissolves in water, forming a milky opalescent liquid with, right-handed polarization. Under the influence of dilute mineral acids, saliva, pancreatic juice, blood serum, and of hepatic extract (prepared cold), glycogen is transformed first into a variety of dextrine, then into glucose. This transformation demands for its production a temperature of 30° C. Cold nitric acid transforms it into xyloidin and warm nitric acid into oxalic acid.

⁵ Pavy maintains that the sugar produced by the liver results from a cadaveric transformation, or from pathological conditions. These pathological conditions have their source in the non-fixation by the liver of an excessive quantity of sugar derived from food, and we ought to distinguish here the amylaceous aliments and the azotized aliments. As for the former, we are concerned with the product of an incomplete digestion; as for the latter (the azotized aliments), three conditions may aid their transformation into sugar: (1) general venous stasis, from exaggerated muscular movements, from asphyxia, etc.; (2) troubles in the portal circulation; (3) section of the filaments of the great sympathetic disturbing the hepatic circulation. (Pavy on Diabetes, London, 1862, 1868. Also Lectures in the Lancet.)

⁶ The number of theories put forth as to the cause of diabetes is considerable. As many as fifty have been designated, but all may be referred to five principal theories, which are the following: —

1. The gastro-intestinal theory.

From the exclusive point of view on which I am placed, that is, the standpoint of treatment, all these theories may be referred to three heads: the hepato-intestinal or alimentary theory; the nervous theory; and, lastly, the theory of nutritive disturbance.

According to the first theory, the glycosuria results either from the too great abundance of saccharine and starchy aliments, or from an excess of activity of the digestive ferments, or from exaggerated action of the functions of the liver. In the normal and physiological state, the glucose which has been formed in the intestinal tube passes into the circulation, and the liver becomes the regulator of this normal glycæmia; when the glucose is in too great quantity, it stores it away; when deficient, it furnishes this principle to the economy, thanks to the glycogen which its cells contain. But let some circumstance arise to trouble this harmony,¹ and we pass from the physiological to the pathological state, and glycosuria appears. This glycosuria then entails a series of modifications, more or less grave in the economy, and we soon have all the symptoms of the confirmed disease. This theory is one of the most seductive, and has for its consequence therapeutic applications which dominate in the treatment of diabetes. I refer to the alimentary regime. My venerated master, Bouchardat, has won the claim to public gratitude by founding on this theory that admirable hygienic treatment which enables us through its rigorous application alone to cause the sugar to disappear from the urine of diabetic patients, at least in the great majority of cases; and when this hygienic treatment fails, be assured that the disease will almost invariably resist all other therapeutic means.

The nervous theory is also based on experimentation,² on clinical experience, and on the results of

II. The hepatic theory.

III. The nervous theory.

IV. Theory based on disturbance of nutrition.

V. Pancreatic theory.

I. *The Gastro-intestinal Theory.* This is the theory of Bouchardat. It is divided into two parts — the alimentary theory, and the digestive theory. In the first the sugar of diabetic patients comes from a dietary overcharged with feculent and saccharine matters. In the second the habitual action of the ferments of the digestive tube is too energetic.

II. *Hepatic Theory.* This theory is supported by Claude Bernard. The cause of diabetes consists in a circulatory trouble, in a secretory trouble, or in a simple exaggeration of the function of the liver. It is supported by clinical observations in which diabetes has been observed to arise from hepatic derangements, such as congestions, or even cirrhosis.

III. *The Nervous Theory.* This theory is based on physiological, anatomical, ætiological phenomena. Patho-anatomical observations have found in diabetic patients lesions of the floor of the fourth ventricle, congestion, ramollissement, sclerosis of the spinal cord and of the brain, alterations more or less profound of the great sympathetic. From an ætiological standpoint, contusions of the encephalon and excesses in the functioning of the nervous system have produced diabetes.

IV. *Theory of Nutritive Troubles.* This is the theory which has recently received the support of Bouchard. The glycæmia of diabetics depends on a fault in the consumption of sugar by the tissues due to a diminution of their nutritive activity. The cause of this retardation is a vicious habit congenital or acquired. Gout and a sedentary life are the most important factors in diabetes. Jaccoud also admits that the cause of this disease is an alteration of nutrition, over production, or lessened destruction of sugar.

V. *Pancreatic Theory.* This theory is based exclusively on pathological anatomy, Lancereaux is its chief supporter. Diabetes is due to lesions of the pancreas, such as atrophy, fatty degeneration, cancer, obliteration of the pancreatic duct.

¹ Colrat and Couturier, taking as their basis certain experiments of Claude Bernard, who showed that when the portal vein is tied the glucose passes directly into the blood, and produces an alimentary glycosuria, have noted that in animals affected with total or partial obstruction of the portal vein from any cause whatever glycosuria always exists.

² Claude Bernard showed, in 1849, that pricking or puncture of the fourth ventricle below the origin of the vagi causes glycosuria.

therapeutics. We know, in fact, since the celebrated experimentation of Claude Bernard, that we can in animals cause a temporary glycosuria by irritating or wounding the rachidian bulb.

Schiff, by traumatic lesions of the entire cerebro-spinal axis, and even of the sciatic nerve, Pavy, Eckhard, Cyon, Aladoff, by traumatism of the ganglia and filaments of the great sympathetic, have arrived at the same result, and have in this way determined a glycosuria equally transient.

I insist on the word *transient*, for it shows us that, unable to produce true diabetes in animals, we cannot practice on this disease experimental therapeutics, for the glycosuria which results from our experiments gets well of itself in the course of several days.

In support of the nervous theory of diabetes clinical medicine furnishes a great number of observations where we see violent blows on the head, or great cerebral excitation, the consequence of too prolonged intellectual labors, painful emotions, chagrin, and disappointment, become the starting-point of diabetes. This it is which explains why this disease is so common among certain classes of the population, such as literary men and persons devoted to scientific and academical pursuits. You will not, then, be astonished to see a considerable number of authorities claiming that diabetes is always of nervous origin.

As for that theory which refers diabetes to disorders of nutrition, it has been quite recently defended, and with considerable success, by Professor Bouchard,³ who has classed diabetes with affections due to retardation of nutrition. Here also we can deduce facts in support of this theory from physiological and clinical experimentation. The glycogenic function is not, in fact, exclusively a function of the liver; all the tissues participate in it. Have we not seen Rouget demonstrate this power of sugar production in all organs of the fetus? Have we not seen Schiele detect glycogen in stratified pavement epithelium? In fine, do not the muscles themselves participate in this glycogenic function, as Boehm⁴ has pointed out? We can, then, say

Section of the splanchnics after the puncture does not modify the glycosuria, but it prevents it when made before the puncture.

Schiff produced glycosuria by section of the optic thalami, crura cerebri, pons, middle and posterior peduncles of the cerebellum, also by section of the spinal cord on a level with the second dorsal vertebra, by extensive lesions of the anterior and posterior columns, and even by section of the great sciatic nerve. Richter has shown that lesions of the sympathetic have the same effect. Pavy, that section of the superior cervical ganglion occasions glycosuria. Eckhard, Cyon, and Aladoff have attained similar results with sections of the inferior cervical and superior thoracic ganglia. (Schiff, Jour. d'Anat. et de Physiol., 1866. Cl. Bernard, Arch. gen. de Med., 1849. Bouchard, Maladies par Ralentissement de la Nutrition, Paris, 1882.)

³ Bouchard shows the difference which exists between arterial and venous blood *à propos* of sugar. In animals this is 40 centigrammes, that is, one kilogramme of arterial blood in becoming venous blood loses 40 centigrammes of sugar. When you take into consideration the total quantity of blood which is transformed into venous blood it is susceptible of demonstration that a man loses in a day at the least 1850 grammes of sugar; now one gramme of sugar demands for conversion into water and carbonic acid 173 grammes of oxygen, and as a man in health never consumes more than 850 grammes of oxygen a day, this oxygen is incapable of burning all the sugar; there remains then 1000 grammes of sugar which is not consumed by oxygen, but which is destroyed by molecular metamorphoses of the entire organism. So, according to Bouchard, the conditions which give rise to hyperglycæmia may be referred to the following heads: (1) everything which prevents the sugar and starch of food ingested from fixing itself in the liver in the state of glycogen; (2) everything which increases the formation of sugar in the liver; (3) everything which interferes with the destructive metamorphosis of sugar in the economy or its fixation in the tissues. (Bouchard, Maladies par Ralentissement de la Nutrition. Paris, 1882.)

⁴ According to Boehm the muscles behave with regard to glycogen like the liver, that is to say, that glycogen augments in the muscular tissue after meals, and is destroyed in muscular work.

with Bouchardat, Jaccoud, and Bouchard that every circumstance which troubles the inmost processes of assimilation and of disassimilation of all the tissues may be a cause of diabetes.

One other consequence of this theory is to call attention to the elimination of urea in diabetic patients, and to cause this azoturia to play a preponderant part as Lecorche has done.

Ought we to take sides with one or the other of these theories, and base exclusively on any one of them our therapeutic endeavors? By no means; and we ought instead to draw from them all the elements of our treatment. But I must before approaching this main subject of my lecture set forth the clinical means which you ought to make use of in order to determine the presence of sugar in the urine, and the quantity of this abnormal ingredient.

You should, in fact, be aware that we cannot judge of the effects of our treatment but by a daily examination of the urine; our prognosis, moreover, is based on such examination; you should then perfectly understand the modes of testing urine for glucose.

Glycosuric urine is generally abundant in quantity, of a high density, which sometimes attains even 1050; it is frothy, stains the clothing, and has the curious property of attracting flies.

To detect glucose in the urine we avail ourselves of the curious oxidizing and reducing property of this substance in presence of alkaline agents, and without stopping to consider the numerous processes which have been proposed by Krause, Luton, Muller, Maumené, Neubauer, and Vogel, I will mention only those of Heller, Boettger, and Trommer.

The first of these processes is based on the oxidation of glucose by potassa, which by heat generates glucic and melassic acids which give to the liquid under examination a more or less black color according to the quantity of sugar in solution. Bouchardat has substituted for the potassa a chemical which is much more easily obtainable, slaked lime or milk of lime. This test, which is a good one when the urine has a large amount of sugar, loses its value when the quantity of glucose is small; then there is liability to several sources of error; the coloring matter of the urine, for instance, may turn brown under the agency of alkalies. Moreover, albumen and mucus may give a dark discoloration, and even an impure preparation of potassa may give the same color.

The process of Boettger is altogether different; it consists in heating urine supposed to contain glucose with a mixture of subnitrate of bismuth and carbonate of soda; in this white liquid thus formed there is soon seen a black precipitate of oxide of bismuth.¹ Although this test has been modified by my master, Behier, and more recently by Primavera, it is subject to numerous fallacies, and the reduction of bismuth may be accomplished by substances other than glucose. Atfield affirms that almost any kind of urine will effect the reduction of bismuth. Therefore this test is

inferior to those which have for basis the cupro-alkaline liquors.

Trommer was the first to recommend testing for sugar in urine by utilizing the reducing properties of glucose on salts of copper, and it is upon this basis that a number of test liquids have been devised, Barreswill's and Fehling's solutions for instance.²

Fehling's solution is the most used at the present day; the reaction is very pronounced, and it suffices to heat in a test tube a mixture of glycosuric urine with one of those cupro-alkaline solutions to see the liquid change from a beautiful blue to a pale yellow, then a lively red, in consequence of the precipitation of the oxide of copper, which gradually settles down to the lower part of the test tube.

At the same time with this method, which is much the most certain, all chances of error are not avoided. Uric acid, urinary pigment, tyrosin, may cause the precipitation of oxide of copper, but this precipitation is much less clear and pronounced than that with glucose. Moreover, albumen prevents this reaction from taking place, therefore it will be necessary to have care when you are examining urine that contains both albumen and sugar (which frequently happens) first to precipitate and filter out the albumen before proceeding to test for sugar.

The employment of the cupro-sodic liquors enables us not only to recognize the presence of sugar, but also to determine the quantity, and this is a matter of great importance. I shall not here speak of the polarimetric processes while admitting that they are the most sure and precise, and that one ought always to have recourse to them when desirous of attaining mathematical exactness in the dosage of glucose, but these are methods of the laboratory, and few physicians can have at their disposal a saccharimeter, whether it be that of Soleil, or the one with a *penumbra*, or the diabetometer of Yvon. I shall only mention the clinical processes which are quite sufficient in practice.

Of all the clinical processes the most simple, the most ready, and the most economical is that of Duhomme,³ which we use every day in the hospital and in private practice, and every physician, it might almost be said every diabetic patient, ought to have one of these little instruments for measuring the amount of sugar in the urine.

It is composed of a little box which has in its interior some test tubes, a spirit lamp, two vials, the one containing a little liquor sodæ, the other Fehling's so-

² There are several formulæ for cupro-potassic or cupro-sodic solutions. These are the principal:—

SOLUTION OF BARRESWILL.

R. Carbonate of soda	40 grammes.
Cream of tartar	50 grammes.
Caustic potash	40 grammes.
Water	400 grammes. M.
Add. Sulphate of copper	80 grammes.
Water	250 grammes. M.

FEHLING'S SOLUTION.

Take of pure Sulphate of copper	40 grammes.
Distilled water	160 grammes.
Caustic soda	130 grammes.
Neutral tartrate of potas.	160 grammes.
Distilled water	600 grammes. M.

Trommer's test, the first in use, is employed as follows: Take a sufficient quantity of liquor potassæ and a solution of sulphate of copper. Into a certain amount of urine in a test tube add an equal quantity of liquor potassæ and two or three drops of the solution of cupric sulphate. If the urine contains sugar the blue mixture with hydrate of copper clears up by agitation, and if the tube is heated a precipitate of reddish cupric oxide is formed.

³ Duhomme, Clinical Saccharimetry, Bull. de Ther., t. lxxxviii., 1875, pp. 163, 214, and 261.

¹ [Boettger's test, which is much in use in this country, is practiced in the following manner: A few cubic centimetres of the urine are mixed in a test tube with an equal volume of solution of sodium carbonate (one part crystallized carbonate and three parts water) a few granules of bismuth subnitrate are added, and the mixture boiled for some time. If sugar be present the bismuth turns brown or black by reduction to elementary bismuth. (Witthaus' General Medical Chemistry.) Witthaus affirms that no other normal constituent of the urine reacts with this test, but there may be some substance present which, by giving up sulphur, may cause the formation of a black bismuth sulphide. — TRANS.]

TABLE GIVING THE RESULTS OF THE RAPID ANALYSIS OF SUGAR BY THE METHOD OF DUHOMME WITH THE GRADUATED DROPPING TUBE OF LIMOUSIN.

Number of Drops contained in one Cubic Centimetre of Urine Examined.	Number of Drops Employed.																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Gr.	180	90	60.00	45.00	36.00	30.00	25.71	22.50	20.00	18.00	16.36	15.00	13.85	12.85	12.00	11.25	10.59	10.00	9.47	9.00
XXVII.																				
Gr.	190	95	63.33	47.50	38.00	31.67	27.14	23.75	21.11	19.00	17.27	15.83	14.61	13.57	12.67	11.87	11.18	10.55	10.00	9.50
XXIX.																				
Gr.	200	100	66.67	50.00	40.00	33.33	28.57	25.00	22.22	20.00	18.18	16.67	15.38	14.28	13.33	12.50	11.76	11.11	10.53	10.00
XX.																				
Gr.	210	105	70.00	52.50	42.00	35.00	30.00	26.25	23.33	21.00	19.09	17.50	16.15	15.00	14.00	13.12	12.35	11.67	11.05	10.50
XXI.																				
Gr.	220	110	73.33	55.00	44.00	36.67	31.43	27.50	24.44	22.00	20.20	18.83	16.92	15.71	14.67	13.75	12.94	12.22	11.58	11.00
XXII.																				
Gr.	230	115	76.67	57.50	46.00	38.83	32.86	28.75	25.55	23.00	20.91	19.17	17.69	16.43	15.33	14.37	13.53	12.78	12.10	11.50
XXIII.																				
Gr.	240	120	80.00	60.00	48.00	40.00	34.28	30.00	26.66	24.00	21.82	20.00	18.46	17.14	16.00	15.00	14.12	13.33	12.63	12.00
XXIV.																				

Figures indicating in grammes the quantity of sugar contained in each litre.

EXPLANATION. — The figures in the first horizontal line correspond to the number of drops employed. The Roman numerals of the first vertical column correspond to the number of drops in a cubic centimetre of the urine under examination. The table reads like the table of Pythagoras. For example, suppose that the urine which you are examining gives 22 drops to the cubic centimetre, and 11 drops are required to decolorise the cupro-sodic solution, you take the figure 11 in the first horizontal line, corresponding to the number of drops employed, and you glance down the vertical column till you come to the point of intersection of the horizontal line which begins with the Roman numerals XXII., and you find the number 20, which indicates that the urine you are testing contains 20 grammes of glucose per litre.

lution, and, finally, two dropping tubes.¹ These two dropping tubes are graduated, the one which is reserved for urine by a mark which indicates a cubic centimetre, the other, which is destined to contain Fehling's solution, by a mark which measures just two cubic centimetres. You begin by taking up one cubic centimetre of urine of which you take care first to count the number of drops by pressure on the rubber ball. Then with the other dropper you aspirate two cubic centimetres of Fehling's solution. This you place in a test tube, and add the same quantity of solution of soda. You then heat the mixture, and after having taken up some of the urine of which you have just counted the drops, you let it fall, drop after drop, into your test liquid, heating the latter from time to time till the entire mixture takes on a reddish color. You have counted the number of drops necessary to obtain this reaction, and you have only to refer to the table herewith given (see adjoining column) to know the quantity of sugar contained in a litre of the urine. This table contains in one column the number of drops present in one cubic centimetre of urine, and in another the number of drops made use of in order to get the characteristic color.

As this method of analysis is very rapid it is desirable, before taking a definite figure, to repeat the process three or four times in order to know exactly the number of drops necessary to obtain the red color in the mixture.

It may be necessary when the percentage of sugar is very large to dilute the urine with an equal quantity of water, which you can easily do by means of your dropper, and in estimating the result you have simply to double the figure obtained. Duhomme has, moreover, given a method for utilizing his saccharimeter for the detection of very feeble quantities of sugar. It suffices in these cases to employ only one cubic centimetre of Fehling's solution, and to count the number of drops necessary to effect the disappearance of the green color you can make use of the same table, but you must move the decimal point one line toward the left.

With this analytical process you can sufficiently estimate the effects of your treatment. You will also have a basis for your prognosis. You are aware that there are two kinds of diabetes. The one is the mild form, *diabetes benignus*, the diabetes of fat people, an affection which permits a person to live a good many years. The other is grave diabetes, the diabetes of lean people, which disturbs profoundly the nutrition of the individual, and determines in quite a short space of time cutaneous, pulmonary, or other complications which rapidly prove fatal.

There has been much discussion as to whether we ought to give the name diabetes to both these affections, some maintaining that the diabetes of the corpulent is nothing but a symptomatic glycosuria, and reserving the name diabetes to the more malignant disorder of lean people; others hold that the two affections are the same, but of different degrees of intensity.

Without entering into this discussion I can affirm that from a therapeutic point of view the examination of the urine will enable you to class your patients in

¹ The dropping tubes graduated to indicate cubic centimetres can easily be obtained of instrument makers.

The method of Duhomme is so handy and simple that it ought to come into general use; it is, in fact, in general use on the Continent. Besides the dropping tubes and the printed table all that is required is the ordinary cupro-sodic testing solutions.

three principal groups: the light forms of diabetes, those of medium intensity, the grave forms. Note first of all that the quantity of sugar which you find is no criterion for prognosis; you may find as much as one hundred grammes per litre, and at the same time have a very mild case. A much more important indication is the persistence of a certain quantity of sugar in the urine in spite of the most rigid dietetic régime.

When, after having made your patient follow scrupulously a rigorous alimentary regimen, you discover that the figure of sugar in the urine keeps at from thirty to fifty grammes per litre, be persuaded that your case is a grave one, and that your pharmaceutical measures, however judicious and appropriate, will not stay the progressive decadence of the organism and the death of your patient. Generally these patients are thin, debilitated, presenting pulmonary complications of a tuberculous nature, and their forces are rapidly exhausted. I have often been called during my medical career to treat such diabetic patients, and despite all my endeavors have not been able for an instant to interrupt the steady decline of the organism.

When, on the other hand, the quantity of sugar, owing to your alimentary hygiene, has fallen to nine or ten grammes a day, you have a case of diabetes of medium intensity. These are the patients who may live many years, but in whom there supervene, when the digestive functions become enfeebled, pulmonary complications, a peculiar comatose state, or it may be cerebral ramollissement, an accident so frequent in those whom Bouchardat calls *petits diabétiques* (that is, persons slightly diabetic). These diabetic patients are amenable to a treatment which opposes to a certain extent the production of such accidents.

In the third group are cases of diabetes of feeble intensity. Here we witness the triumph of alimentary hygiene, for it alone effects very rapidly and in a few days the disappearance of the glucose from the urine, however great the previous quantity. How often have I seen such obese patients, generally arthritic and gouty, who had been voiding two hundred to three hundred grammes of sugar per day, and in whom the régime of Bouchardat has enabled us in a few days to bring down the figure to zero. Nevertheless in these patients the sugar reappears whenever they commit errors in diet.

You see, then, that this dosage of sugar, or, in other words, the determination of the quantity of sugar in urine, is a matter of capital importance to your patients both from the point of view of therapeutics and of prognosis, and I pass now to the consideration of the hygienic and medicinal means applicable to the treatment of diabetes.

(To be continued.)

Original Articles.

A CASE OF DELAYED PUTREFACTION.¹

BY W. H. TAYLOR, M. D., MEDICAL EXAMINER.

ON Wednesday, May 2, 1883, I was requested by the district attorney to make an autopsy upon the body of M. B. A., a woman who was supposed to have come to her death by the administration and effects of poison. Briefly, the history was that she was subject to attacks of hysteria at times, particularly after overwork, and was accustomed to take fluid extract of skull-cap to relieve her "nervousness." Having such an attack about two weeks before her death, after a hard day's work, she took from her husband two thirds of a teaspoonful of a new bottle of skull-cap procured at a reliable druggist's in New Bedford. Shortly after the dose she had a convulsion, and an hour subsequently a second convulsion. She had no convulsions after this, but gradually grew worse, and died on March 24th without remarkable symptoms supervening. Her attendants were of the homœopathic persuasion, and I am unable to obtain a coherent history from them. The consulting physician made some vague remarks about "trouble with the pneumogastric," from which I inferred that the respiration showed some abnormal qualities. He was, moreover, strongly of the opinion that the deceased had been poisoned, and named gelsemium as the agent employed. She had no marked dyspnoea, no marked pulse change, no vomiting, pain, or diarrhoea, and passed a good quantity of urine in which no albumen had been discovered. The information derived from the attendants was sufficiently vague and inconclusive.

The husband of the deceased had never abused his wife, but had been on terms of intimacy with a woman living in the house. Nothing absolutely criminal had been seen, but on sundry occasions he had manifested a degree of affection for the lady's person which seemed ill-adapted to his position as a married man.

The body lay in the house from the 24th to the 27th of March, and was then buried in a church-yard at the top of a high hill; consequently, at the time of my examination, it had been exposed to the influences of decay for forty days.

Owing to the notoriety of the case in the neighborhood, it was deemed best by the legal officers to conduct the examination by night, though I objected on the score of artificial light.

Arriving at the church-yard at nine o'clock P. M., the body was exhumed and carried to a tomb in the vicinity. I noticed that the soil was dry, and a gravelly loam. The body was buried at a depth of five feet for the lowest point. The coffin was an ordinary wooden one, rosewood stained. The body being removed from the coffin, a feeble petroleum lantern was offered as my sole light, and the autopsy was commenced.

The body, which was that of a well-nourished woman of forty-two years, exhibited rigidity, strongly marked. The face was fresh in color, and the eyes were moderately sunken. After removal of the clothing the abdominal walls gave a sound on percussion like a frozen body, and I remarked to the assistants that the body was frozen. An instant's reflection showed this to be impossible, as the ground at that level had been free from frost for a month. The entire in-

¹ Read before the Massachusetts Medico-Legal Society, October 3, 1883.

— A statue of Pinel, the noted benefactor of the insane, is to be erected in the Place de la Salpêtrière, in Paris. The movement was originated by the Medico-Psychological Society, and the project was aided by the Minister of Fine Arts and the municipal council of Paris. The work is by Durand, and comprises two figures, Pinel holding in his right hand broken fetters, and at his feet a young insane girl raising her eyes to her liberator, but with her arms preserving the attitude of being bound.

tegument presented a hard, tallowy feel, indenting on firm pressure, the indentations remaining, with no tendency to a return of the normal appearance. There were absolutely no indications of putrefaction to be seen externally, beyond the slight sunken appearance of the eyes above mentioned. The skin of the abdomen was as white and clear as in life, and the same remark would apply to the entire anterior aspect of the body. The back and the posterior aspect of the arms, forearms, thighs, legs, and neck were of a bright red color, entirely different from the usual post-mortem staining, and this color extended half way up the lateral aspect of the body and limbs. The color was not that of a part reddened by inflammation, but a *bright* red, which, perhaps would be described best by the word *brilliant*.

On making the usual median incision, the feel was that of cutting through soap or tallow; the margins of the cut had to be forcibly separated, and would then remain in the position placed without being influenced by gravity. The parts which seemed chiefly concerned in this abnormal state of affairs were the subcutaneous, fatty, and cellular tissue.

The abdominal cavity was perfectly dry. The omental fat presented the same characteristics as the subcutaneous. The viscera were as fresh as if the subject had died within a few hours; even the spleen was hard and firm. The liver was of normal size; its cut surface showed points of central congestion, with slight fatty change in the immediately adjacent cells. The kidneys exhibited a possibly slight diminution in the cortical substance, but there were no marked changes; their capsules were easily separable. The uterus and appendages, bladder and rectum, presented nothing noteworthy. The stomach contained an ounce of stained mucus; it was healthy as to its coats. The intestines were nearly empty; there was a small collection of ordinary-looking fecal matter in the *caput coli* and for a few inches beyond.

The pleural cavities were nearly dry. The lungs were fresh, somewhat congested posteriorly, otherwise normal. The heart was collapsed and dry, about one fifth enlarged; its walls were flabby, and the muscular fibres were somewhat fatty under the microscope. The interior of the cavities was stained black by recent blood-clot, but no old clot was found. No conveniences were at hand for testing the valves, but they appeared normal.

The brain was slightly softened, but could be easily demonstrated; no abnormal appearances were found.

The spinal cord presented the same characteristics as the brain. It was somewhat stained by blood externally, probably from the position it sustained for so long a time after death.

The stomach, intestines, kidneys, a portion of the liver and the spleen were taken, on the following day, to Boston, and examined for organic and inorganic poisons by Dr. Charles Harrington, who reported negatively as to both.

No odor of decomposition was evident about the body either before or after section. An odor was perceptible, but it was an animal odor, which resembled, but was not quite, a *urinous* smell. The fact that it was not disagreeable may be inferred when I state that owing to the state of alarm which the grave-diggers were in we could procure no water to wash our hands, and were obliged to ride fourteen miles home before we could remove the traces of the autopsy; during this time we noticed nothing of an odor

worthy of remark. Coffins in the tomb where the autopsy was made contained three bodies, which had been there for periods varying from three weeks to three months, but there was no odor from these, and they appeared but little changed about the face.

The grave-digger stated that cases of adipoceros change were commonly found when bodies were removed from the church-yard after long periods of interment. Whether the influences which produced this change could have operated to preserve the subject of this paper or not is a matter, of course, beyond demonstration. The observation is noted for what it is worth.

Perhaps no question comes up more frequently and is of more importance to the ends of justice as well as to the interests of a wrongfully-accused person as that of the length of time which has elapsed since death. Data are numerous showing the extreme rapidity with which decomposition supervenes, but little can be found on the retardation of the putrefactive process beyond a few days. With a case of the character of the one reported here in mind, statements relating to the length of time which has elapsed since death, based upon the appearance of the body, would, perhaps, be less positive than has been hitherto too often the custom. When it is considered, in reviewing the case, that the body lay in an inhabited house for three days before burial, in cool, moist weather, without ice or any preservative thrown into the cavities (as I am informed by the undertaker), was subsequently encased in a thin board coffin and buried in loose, gravelly loam, free from frost, where it remained for thirty-seven days before exhumation, and then appeared fresh, with no color or odor of decomposition about it, I think it will be found sufficiently noteworthy to merit the attention of persons interested in forensic medicine.

REPORT ON RECENT PROGRESS IN THE CONSTRUCTION OF INSANE HOSPITALS AND MANAGEMENT OF THE INSANE.

BY WALTER CHANNING, M. D.

PROVISION FOR EPILEPTICS.

UNDER the title *Die Fürsorge für die Epileptischen*, Dr. Pelman continued the discussion of this important subject (which has lately been gone into by Dr. Jolly) at the recent annual meeting of the German Alienists. It will be remembered that Dr. Jolly divides epileptics into four groups, namely: (1.) Epileptics who do not need hospital care, but need public care and can be treated in the out-patient department of general hospitals. (2.) Cases with temporary cerebral disturbance, which must be sent to institutions. This group comprises, (a) cases with transitory mental disturbance, which should go to lunatic asylums; (b) cases temporarily unable to work for their living, which should be in a special section in a general hospital. (3.) Cases that need hospital treatment for a long time, or permanently. To this group belong the chronic insane epileptics, who should go to insane asylums. Others of this group, as paupers, or persons unable to work, would have to go to special institutions. (4.) Epileptic children. These should not be placed with adult epileptics, as such association is injurious. They could be cared for in special wards of idiot asylums.

¹ Allgemeine Zeitschrift f. Psychiatrie, Band xxxix., Heft 5.

There is much uncertainty as to the actual number of epileptics in Germany. Dr. Pelman states that it ranges somewhere from one to six in 1000 of the inhabitants. Dr. Jolly gives only .09 in 1000, which is too small a number. Dr. Pelman gives 1.05 to 1000 as about the correct estimate. In the whole of Germany there are about 45,000,000 persons and 67,500 epileptics. One tenth of these, or from 6000 to 7000 epileptics, will need hospital accommodation.

Only about twenty per cent. of this number will recover. The remaining eighty per cent. will be permanent residents of hospitals. Dr. Pelman does not believe in small institutions for this large number of epileptics, but rather in colonies. He sums up his opinion in the following conclusions: (1.) Insane epileptics, presenting both acute and chronic forms of insanity, should go to insane asylums. (2.) Epileptics who are not insane, but are unable to earn a livelihood, should be brought together into colonies, of a rural character, and in these they should be furnished with out-door employment. (3.) Juvenile epileptics should be placed in institutions similar to idiot asylums, but not connected with them. (4.) Private benevolence should found the epileptic colonies. It might be of a religious character. The State would only give it support in maintaining its position. (5.) Epileptics not needing constant hospital care should receive polyclinic treatment, and occasionally, when necessary, be taken into the special sections reserved for their treatment in general hospitals.

In the discussion which followed the paper of Dr. Pelman, Binswanger said that his experience at the Charité in Berlin has shown him that it was extremely difficult to discriminate between sane and insane epileptics. Sometimes an epileptic would be admitted for insanity, sometimes for epilepsy. Epileptics are often weak-minded, and very easily may have temporary attacks of acute insanity. Dr. Mendel was of the opinion that about ninety per cent. of persons who had had epilepsy for some time were the subjects of some form of mental disease, and Group 2 of Dr. Pelman would comprise but a small number unless he should say "quiet" as well as "persons unable to earn a livelihood." Dr. Pelman agreed with Dr. Mendel that a very large proportion of epileptics showed some mental change, though not as many as ninety per cent., but practically he would not extend his meaning of insane epileptics to an unnecessary degree. Dr. Kind stated that at Bielefeld there was a division for juvenile and idiotic epileptics. He had come to the conclusion that it was not necessary to separate epileptics from other idiots. If they were treated together they were better cared for. Von Gudden agreed with Kind in this conclusion, but said there were often juvenile epileptics not lacking in intelligence, and they should not be put in idiot asylums, but required special institutions. He would ask Pelman if he advised special wards for epileptics in ordinary insane hospitals. The number of epileptics in the asylum with which he was connected was only fifteen out of a total population of 650. This number included both men and women, and they were scattered throughout the various hospital wards according to their mental condition. It would be pecuniarily, administratively, and medically difficult to provide separate wards for them. Conclusion 4 did not seem to him absolutely necessary. A good deal was being done to bring religious orders into institutions.

Dr. Pelman said that Jolly made a particular point of *State care* for epileptics, while he made a particular point of *private benevolence*.

THE CARE OF INSANE CRIMINALS.

It will be remembered that this subject, which every year is referred to in so many insane hospital reports, was last year briefly reviewed in this report with special reference to the discussion of the French Society of Alienists. It has been again brought up at the annual meeting of the German Alienists in September last, when Dr. Zinn, of Eberwalde, read a paper entitled *Care of Criminal Insane Persons, or Criminals Suspected of Insanity, etc.*¹

This paper is a very full one, going into the care of insane criminals in England, France, Italy, and America, and comparing the systems of these countries with that of Germany. Dr. Zinn comes to the following conclusions: (1.) Insane criminals admitted into ordinary insane asylums should have no other treatment or surroundings than those in use for the dangerous class of common insane patients. It is the duty of the insane asylum directors to preserve its character as a hospital for the sick, and in no way to change any portion of it to suit the needs of any other class. (2.) A knowledge of psychiatry as well as experience in its practical application are indispensable to the prison physician. (3.) Very acute or rapid attacks of insanity in convicts should be treated in the prison. If the proper arrangements are wanting, they should be made at once. (4.) It is desirable to build prisons for convicts with bodily and mental disease similar to the English invalid prisons. With such buildings, or invalid prisons, all the arrangements necessary for a department for the insane should be combined. Persons belonging to the criminal class, if becoming insane when at liberty or when awaiting trial, should be sent to the insane department of the invalid prison, and detained there as long as there was any possibility of danger to society from them. (5.) Persons who have committed crimes when insane should be sent to an ordinary insane institution. To confine them in an institution for the insane of the criminal class is not right. (6.) Persons during trial, whose mental condition is uncertain, should, if not belonging to the criminal class or not violent or dangerous, be sent to an ordinary insane asylum for observation.

In the discussion following this admirable paper of Dr. Zinn, Dr. Gutsch said that his experience was in accord with that of Dr. Kuecht. He did not favor insane departments annexed to prisons, for the physician in charge did not have the independence in the direction that was necessary to successful psychiatric management. He would recommend separate penal institutions (*strafanshalten*), which would provide for criminals with fully developed insanity, as well as those with simple mental defect. With these institutions he would combine hospitals that should possess all the means of treatment for the ordinary insane, and in these could be placed the curable cases, and such as required the particular treatment furnished only in a lunatic asylum.

Von Gudden, Hitzig, Fürstner, and others, expressed themselves as fully in accord with Zinn. Resolutions offered by Dr. Zinn were unanimously adopted, calling on the government to consider the need of providing

¹ All. Zeitschrift f. Psychiatrie, Band xxxix., Heft 5.

for insane criminals, and suggesting the proper rules of action to guide them in so doing.

OCCUPATION OF THE INSANE.

Under the title of Farm-work for the Insane,¹ Dr. Schroeter, of the Dalldorf Asylum, Germany, considers this subject. The employment of the insane as farm-laborers has for many years been believed in by insane asylum physicians, but has only been found practicable within a very recent period of time. Laehr has stated that in the time of Danerow it was sometimes the practice to send insane inmates of institutions out to work for neighboring farmers.

At the present time the labor question is looked at in two ways. Persons on the one side recognize the advantages of employment in the open air for the insane, but, at the same time, advise caution in the choice of the kind of work, and number of cases who are fitted to undertake it, because of the danger of accidents, escapes, etc., and the small number of competent attendants to oversee such work. Those on the other side believe in employment for nearly all of the insane — in recent cases as well as in cases of long standing, and they also believe that most of the insane can undertake ordinary employments, and, with the exception of a small number, live after the fashion of common working people.

In order to give the question fair consideration, and arrive at some definite result, each institution should give employment to as large a number as possible, and publish the results. This has been done in the asylum at Dalldorf since its opening in February, 1880. The insane department contains about 270 men; and it is with these that the experiment has been made. The admissions of men to the insane department are large, 295 having been admitted in the year 1881. Most of these come to the asylum without history, or history of a very brief character. It is therefore necessary to observe them for a short time after admission, though in a certain number of cases, where the disease is of a harmless nature, it may be possible to give them outdoor labor at once. But many who are subject to hallucinations, or are epileptics, or whose insanity has arisen from the use of alcohol, are liable to sudden attacks of excitement, and, even if capable of working and anxious to work, first require treatment in the institution. In a large portion of cases, the general bodily condition is so poor that a long period of time must elapse before they will be in proper condition to undertake physical work.

The reward system of inducing patients to do out-of-door work by giving them beer, tobacco, etc., was taken into consideration, but not undertaken.

Taking the whole number of patients who engaged in out-of-door work, there were, out of 263, seventy men who could be relied on more or less. The percentage upon this basis would be 26.6. Taking another period of time, there were, out of 275 insane men, fifty-six who could be relied on to work regularly, or 20 per cent., and eighteen who would occasionally work well; giving altogether 27 per cent. as the proportion of insane men competent to work at farm-labor for a longer or shorter period of time.

This percentage seems to represent, as nearly as possible, the real proportion of insane men in a German

asylum who might be expected to render any real service as farm-laborers.

THE COST OF INSANE ASYLUMS.

Dr. Rayner² refers to the position taken by Dr. Hack Tukey, that small asylums are from an economic point of view better than large ones, and gives some tables of his own which seem to indorse this position. These tables are made up by dividing the whole of the county asylums into four classes: the first being asylums of not more than 450 beds; the second 450 to 600 beds; the third 600 to 800 beds; and the fourth 800 beds and upward. From the statistics given it appears that the large asylums cost £44.2 per bed more in construction, and £1.06 per bed annually in repairs more, than the medium asylum of 450 to 600 beds, and patients maintained in the former cost 6½d. per week more than in the latter. The medium-sized asylums (450 to 600) also have the advantage in the same comparisons over the asylums of 600 to 800 beds, in which it might have been expected that an increase of patients with little corresponding increase of staff would result in cheapness.

Dr. T. Claye Shaw, superintendent of the Middlesex Asylum, takes a different position in regard to the cost of large and small asylums.³ He says that, "It is to be expected that those asylums that have the most unfavorable statistics should cost the most, because in proportion as the population is more feeble the expenses for attendance and extra diet will be greater, and the recoveries will be fewer; and there can be no doubt that in proportion as an asylum is large, so does it get filled with unfavorable cases in a greater proportion than would have been the case had it been of moderate size and more select in its receptions." It does not follow that large asylums are always in themselves the most expensive, Prestwich and Hayward's Heath being examples to the contrary. Often small asylums receive scarcely any but curable cases.

The average cost per head cannot be taken as the measure of asylum proficiency. As death-rate and expense rise together, so do high recovery rate and cheapness go hand in hand with low death-rate. With the provision list in one asylum at five shillings and two-pence per week, and in another of nearly the same size at four shillings per week, the recoveries are not so numerous in the former as in the latter. The drug charge in the two asylums is the same; in the less favorable of the two the salaries and wages are much larger, so that medical and general attendance tell in inverse ratio to their quantity. The difference in the two asylums is owing to the nature of the asylum populations.

Primâ facie an asylum for 1000 or 1500 patients ought to be less costly than one for 600 or 700. There are, however, special reasons why this may not be the case. It will often be found that the smaller asylums err in want of accommodation; they may not have a proper chapel, recreation hall, or laundry, or the wards are too small and over-crowded, or they are deficient in heating and electrical appliances. The larger asylums are more complete in these respects.

It is difficult, however, to compare the expense of erection, as different building committees have very

¹ *Zur landwirtschaftlichen Beschäftigung der Irrenkleinere Mittheilungen. All. Zeitschrift f. Psychiatrie, Band xxxix., Heft 6.*

² *Relative Cost of Large and Small Asylums.* By Henry Rayner, M. D., Medical Superintendent, Hanwell Asylum. *Journal Mental Science*, April, 1883.

³ *On Large and Small Asylums, Journal of Mental Science*, July, 1883.

different ideas. In this and other ways it is almost impossible to compare asylums, and what will be true for one may not be true for another, or even possible.

Dr. Chapman continues the investigation of this subject in the same number of the *Journal of Mental Science*.¹ The conclusions at which he arrives are, he says, still unfavorable to the large asylums, but not so unfavorable as he supposed at first from more limited statistics. As to cost, one table shows that the cheapness of moderate-sized asylums is due not entirely to their size but also to the circumstance that they happen to contain a smaller proportion of active disease amongst their patients; if the tables may be implicitly trusted, about one third of the saving is due to this circumstance. In relation to recoveries, it is found that the rate has improved within the last few years. This improvement, however, is probably more apparent than real, as in some of the favorably situated asylums there is a real gain; while in the lunatic wards of work-houses there is, if anything, a falling off. The death-rates are principally affected by the proportion which the admissions bear to the average number resident.

As conclusions reached by the way are more firmly established, as well, perhaps, as of greater, if not more practicable, interest, than those bearing on sizes of asylums, may be noted:—

(1.) That a rapid increase in the proportion of asylums to the total number of lunatics of a district, which is more or less synonymous with the free admission to asylums of chronic cases previously kept in work-houses or at home, results in a low ratio of recoveries without any distinct effect on the death-rate, but probably slightly reducing it.

(2.) That the accommodation of a large proportion of the lunatics of a district in work-houses results in selected cases being sent to asylums, and consequently these asylums present higher rates of recovery.

(3.) That satisfactory recovery rates tend to go with satisfactory death-rates, and after allowing for such disturbing elements as noted above, and for certain asylums showing good rates at the expense of others, there is a probable margin due to efficiency.

PUNISHING LUNATICS.

In the January number of the *Journal of Mental Science*, Dr. R. W. D. Cameron published a paper on the Use of Restraint in Asylums, and, among other subjects, spoke of the effect of punishment on the insane. In the April number of the same journal there is one of those sharp and caustic editorials, which are somewhat characteristic of this journal, on the Punishment of the Insane.

"Punishment," the writer states, "is the positive infliction of suffering as a righteous result of wrongdoing, and as a deterrent from its repetition." But the wrongdoing of the insane is the result of their malady, which produces it either directly through delusion or indirectly by perverting their moral sense and relaxing their self-control.

There must be a broad and absolute distinction between treatment of criminals and treatment of the insane. "Better that some criminals should escape punishment under the shelter of insanity than that one insane person should be dealt with as a criminal."

"It was supposed that this principle was universally accepted, and it is, therefore, somewhat startling to be now told that when ordinary methods fail to induce a person to work the infliction of punishment is imperatively demanded in his own interest. The insane person, we are told, should be terrified by the use of hyoscyamine, should be compelled to swallow disgusting mixtures, or be shocked by plunge or shower baths, or be disfigured by cropping the hair, or degraded by ragged clothing, or burdened by heavy weights attached to the body."

The idleness, irritability, and turbulence of insane persons are a part of their malady. It would be as reasonable to punish an epileptic manifesting physical convulsions as to punish a lunatic for mental moods and explosions which are equally the result of disease. It is true that crime and insanity are often strangely mixed, and that some persons appear to be at certain times on one side, then again on the other of the narrow line which divides them. But punishment seems to harden rather than to benefit in these cases, and does nothing to develop self-control or promote recovery. Prison records show that punishments are futile when applied to such persons. Thus the only cases which in an asylum might afford the shadow of justification for punishment are just those in which it is worse than useless.

To punish by means of drugs is the saddest punishment of all; it is a degradation of medicine, and a double wrong to the patient.

Indulgences and rewards may sometimes be properly extended to the orderly and industrious inmates of an asylum, and withheld from those who will not exercise what self-control remains to them. Rewards, as a rule, do not go far enough. The judicious employment of a reward system tends to promote self-respect and habits of industry, and in many cases may lead to recovery.

"If the discussion of the subject of the punishment of the insane leads to a fuller recognition of the all-important one of providing them with employment, the writer of the present article will have no reason to regret that the pages of the *Journal* have been the channel of the expression of views which, to say the least, are liable to be misconstrued." Recovery very often begins from the time when the habit of daily occupation is reestablished. Employments of the most varied kind should be furnished for patients, those which are suitable for some being entirely unsuited to others.

In the concluding paragraph but one of this article the writer says: "In a word—and this is the sum of all the moral treatment of the insane—the appeal is to all that is sane in the man to conquer and correct all that is insane in him."

INSANE HOSPITAL ARRANGEMENT AT KANKAKEE.

The last report of the Board of Public Charities of Illinois² contains, as usual, much that is of interest with reference to the insane. Among other subjects treated of, that which is included under the heading of the Kankakee Hospital is of special interest.

At the time when, some thirty years ago, the cloister or monastery plan of building lunatic hospitals received the early indorsement of the Association of Medical

¹ On the Recovery and Death-rate of Asylums as Influenced by Size and Other Circumstances, by T. A. Chapman, M. D.

² Seventh Biennial Report of the Board of State Commissioners of Public Charities of the State of Illinois. Presented to the Governor, November, 1882.

Superintendents of Institutions for the Insane the lunacy question had not assumed, in America, its present vast proportions. The census of 1850 showed the number of the insane in the United States to be 15,610. The number of insane in hospitals probably did not exceed 4000, and the average number in each much more than 150. The census of 1880 showed the number of the insane in the country to be 91,846, and the number in hospitals 40,942. In twenty-five of the leading hospitals of the country the average number in each is now 525. The altered conditions of the problem require a new solution, and this solution is more likely to be found by the adoption of new rather than of antiquated methods.

In the general principles of construction and management of the hospital at Kankakee it is believed that some of the conditions of this problem have been at least partially solved. The general arrangement of the hospital, as is already well known, consists essentially of a large central building and various attached buildings built on adjoining lots. The interest of the experiment naturally centres in these buildings, which are not cottages. They are known as detached wards. They contain varying numbers of patients, the smallest of those already built containing thirty-five, and the largest sixty-four, patients. When the whole plan of the asylum buildings has been carried out there will be enough of these detached wards, together with the central building, to accommodate not less than 1500. The institution when fully developed will present the appearance of a village highly organized, thoroughly policed, in admirable sanitary condition, and under complete control.

An idea prominent in the organization of the Kankakee institution was the removal of unnecessary restrictions upon the personal liberty of the patients. From the large number of detached wards it is possible to much more largely individualize the treatment than in an ordinary hospital for the insane. One ward, for instance, may be locked, another unlocked; one ward may have barred windows, and another open windows; in one ward the patients may retire at eight, in another at eleven, etc.

The detached wards react upon the administration of the hospital in a singular way. The sense of responsibility on the part of attendants is increased when, in addition to taking away restraining apparatus, as is done in this hospital, the doors and windows are thrown wide open, thus necessitating increased vigilance. This sort of effect does not stop with the attendants, but extends to the officers and physicians in charge, for the success of the detached wards depends primarily upon the good judgment shown in the selection of the patients who are to occupy them, and to make this choice in the wisest manner the medical officers are obliged to observe their patients more closely as individuals.

With a complete system of detached wards the discipline of the hospital can be easily maintained by the simple exercise of the power of transfer from one ward to another.

An institution arranged in the manner that this one is will require a greater number of assistant physicians than an ordinary hospital for the insane.

It has been undertaken to separate at Kankakee, more than is usual, the functions of the financial from those of the medical head; but as it is evident that the administration of the business affairs and the govern-

ment and discipline of so large a hospital must occupy the entire energies of one man, it will be seen that the direct medical treatment of patients must be intrusted by the superintendent to his first assistant. This assistant should be unusually well qualified, and paid a liberal salary. The other assistants should be scattered among the different detached wards, and the superintendent should live in a house separate by itself. Two criticisms upon the hospital are offered by the writer, the first being, that the main ward building, which accommodates three hundred patients, is too large and prominent. A better result would have been attained if no central building had been erected, and the wards designed for recent and curable, or refractory and troublesome, patients had also been detached. The other criticism is, that buildings for the same purpose might have been erected at a less cost. The limit of economy in building has probably not been reached as yet.

SPANISH INSANE ASYLUMS.¹

Dr. Seguin visited fifteen of these asylums, and gives an interesting account of his visit. He found the Spanish physicians in charge of asylums very much behind the times in their knowledge of insanity, but they were willing to acknowledge that such was the case, which, Dr. Seguin thinks, promises well for the future.

Most of the asylums were over-crowded, badly arranged, badly ventilated, badly heated, and in general, badly managed. The patients in some of the asylums were filthy. In most they had little or no occupation or amusement provided for them, though occasionally a billiard table was found in one of them, and perhaps a piano, though never in use.

One of the best-managed of the private asylums was apparently that of Dr. J. M. Esquerdo, near Madrid. Dr. Esquerdo is one of the most eminent of the alienists of Spain.

This asylum contains about sixty inmates. The buildings are arranged to form a double square; one being for men and one for women. Each side of the house has its own gardens and yards, called "patios," which are similar to those which are found in the ordinary houses of South Spain. Patients pay from \$25 to \$100 per month, and have rooms accordingly. The rooms are heavily locked and barred.

The female patients of each class eat separately, but the male patients have their meals in the same room. Each class has a different table, with a different quality of food and wine, except that all have one kind of bread.

Dr. Esquerdo uses very little restraint.

One of the oldest asylums in Europe is the Provincial Asylum of Zaragoza, having been founded in 1425. It contains 430 patients, and is very much over-crowded. Thirty epileptics are isolated in a wing by themselves. No restraint is used, but patients are isolated in small, ill-lighted, and wretched rooms.

For the purpose of erecting a new asylum for Zaragoza, \$600,000 have been appropriated. The land has been given. The buildings will be arranged in pavilions to accommodate each one hundred patients. It is intended to build eight of these pavilions.

The oldest asylum of Western Europe is that at Valencia, which was opened in 1409. It is called El

¹ Notes on Spanish Asylums for the Insane. By E. C. Seguin. M. D. Journal of Nervous and Mental Diseases, July, 1883.

Manicorno de Jesus, and is situated near the gate of San Vicente. The building is an altered convent, and not the original building. There are 530 inmates. The rooms for the epileptic, violent, and filthy patients, are very bad. Restraint is greatly abused. In this regard the asylum is a century behind the times. Camisoles, muffs, etc., are used; but, what is worse, there is an iron belt, made in two segments, connected behind by a hinge, and in front by a screw and nut. On either side, secured by a rivet, is an iron oval chain link, two inches long, to which is attached an iron manacle or bracelet, opening with two hinges, and secured by a screw and nut. The whole apparatus weighs from four to five pounds.

The worse thing of all at this badly managed asylum is the way in which the filthy demented patients are treated. In one long, narrow, dismal room Dr. Seguin found between thirty and forty women squatting, nearly naked, on a wooden platform about six by twenty-five feet, and raised one foot from the floor. On the other side of the same hall, a yard away, perhaps, was another sloping wooden platform extending the length of the room and covered with corn husks and straw. On this these unfortunate patients passed the night side by side. A bad-looking man, assisted by a woman, had charge of the room.

In the conclusions with which Dr. Seguin concludes his paper, he states that at a guess he would estimate the total number of the insane in Spain, including cretins, idiots, epileptics, etc., at about 15,000.

He found that the percentage of cases of general paralysis varied according to the observer from two to twenty-five per cent. The disease has greatly increased within the last fifteen years. As to the cause there was a difference of opinion, alcoholism alone, or combined with syphilis, as well as over-intellectual exertion or mental strain consequent on the increasingly severe struggle for a living, all being assigned as the cause.

There is no special fault to be found with the best private asylums of Spain, except that the violent and filthy patients are not treated with enough patience and humanity, and the male patients do not have pleasant and cheerful rooms to meet in. The provincial asylums are all bad.

THE USE OF STIMULANTS IN INSANE HOSPITALS.

The *Journal of Mental Science* again calls attention to this subject.¹ There is no doubt that stimulants are less used in English asylums than formerly. There are now twenty-seven pauper asylums in England known to the editors of the *Journal*, where beer has been given up as a beverage. Dr. J. A. Campbell, of the Cumberland and Westmoreland asylum, after several years' trial, is satisfied that patients are much better without it, and Dr. Rutherford of the Lenzie Asylum, who has many out-of-door workers, gets along without it. Dr. Lindsay, of the Derby County Asylum, does not use beer as a beverage, not only considering patients better without it, but also thinking that the habit of drinking is sometimes fostered by its continued use in the asylum. He has greatly diminished the use of stimulants in the treatment of disease, substituting milk, arrow-root, and other nutritious articles of food. The general health of the inmates seems better than before.

At the Glamorgan County Asylum milk has been substituted for beer with good results among the pa-

tients. The female attendants were allowed a money equivalent, and the males a uniform.

Several other institutions are spoken of where the results have been good. It is to be hoped that the movement now in progress will lead to the general adoption of a more liberal and nutritious diet for the insane in this country as well as in England. If such is the case we shall undoubtedly see a time when stimulants will rarely be needed.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

A PROTEST BY DR. J. G. ADAMS.

At a stated meeting of the Academy held Thursday evening, November 1st, DR. JOHN G. ADAMS read a protest against the adoption of so much of the minutes of the preceding meeting as referred to the passing of the resolution offered by Dr. Loomis to rescind the resolutions of Dr. Flint, in regard to the admission of new members adopted by the Academy at the last meeting before the summer vacation, on the ground that the motion to rescind was clearly out of order, and should not have been entertained by the Academy. Among the reasons which he gave were the following: That a question once put to a deliberative body could not again be acted on except by a motion to reconsider. That section 6 of the Rules of Order of the Academy directed that after any question had been decided, except one of indefinite postponement, any two Fellows who voted in the majority might, at the same, or next stated, meeting move for a reconsideration thereof; without which no discussion should be allowed.

The fact was, that two Fellows who had voted in favor of Dr. Flint's resolutions had moved for reconsideration, which was agreed to, and the Academy had then decided to indefinitely postpone the reconsideration. That the motion to rescind was, therefore, unparliamentary, and that under the rulings of the chair motions could be adopted and rescinded in the Academy without regard to rules of order. Dr. Adams claimed, consequently, that the adoption of Dr. Loomis's resolution was a direct violation of the By-laws, and submitted that the action of the Academy on it was null and void.

DR. T. HERRING BURCHARD read a memoir of

THE LATE FREDERICK D. LENTE,

Corresponding Fellow of the Academy of Medicine, in which he paid a feeling tribute to the many noble qualities, and high professional attainments of the deceased; after which the paper of the evening was read by DR. FESSENDEN N. OTIS, on

THE RAPID EVACUATION OF STONE FROM THE BLADDER AFTER CRUSHING—WITH PRESENTATION OF A NEW AND SIMPLIFIED EVACUATOR.

After stating that the revolution which had been going on for the last five years in regard to lithotripsy was now complete, and that the procedure advocated by Professor Bigelow had already been formally accepted by all the authorities of Europe and America, he quoted from the paper read by Dr. Bigelow at the International Medical Congress in London in 1881,

¹ The Beer Dietary in Asylums. July, 1883.

and spoke particularly of the modesty with which the latter had alluded to his own illustrious achievements. From the time of Civiale, he said, down to the year 1878, there had been little change in the manner of operating for stone in the bladder by lithotrity. The duration of the sittings were as brief as the skill of the surgeon, with the fear of cystitis always before his eyes, could make them; while the use of anæsthetics was exceptional. Now, however, anæsthetics were used as the rule, and the sittings had even been extended to three hours without injury to the patient.

Dr. Otis* then proceeded to describe the original evacuator of Sir Philip Crampton, devised in 1846, and exhibited a diagram of it. Diagrams were also constantly referred to in describing the later instruments of various operators. Crampton's evacuator was modified by Mr. Clover, of London, who attached a receiver of glass to the rubber bulb; and to this modified apparatus he subsequently added a vertical receiving chamber. Professor Bigelow had paid a willing tribute to the efficiency of this instrument, which was the only one of any value in existence before his own. His own success in lithotrity, he said, depended in some measure on the fact that the tolerance of the bladder had been established; but the chief point about his method was the use of a large catheter, whether straight or curved.

Between Clover and Bigelow, however, Dr. Otis continued, there was a distinct hiatus, and this he claimed himself to have filled. Up to 1874 the normal calibre of the male urethra had been regarded by all authorities as twenty-one millimetres. In 1874 he had invented his urethrometer, and with it had demonstrated, beyond the question of a doubt, that the normal calibre was thirty-two millimetres. Professor Bigelow had said, in his earliest monograph, that whether or not the position of Otis was adopted, there could be no doubt that the urethra would admit a much larger tube than that commonly attached to the Clover or the French instrument; and at the International Medical Congress of 1881 he had declared that the smallness of the catheter employed in lithotrity had delayed progress in the operation for half a century. The hiatus, Dr. Otis believed, was thus satisfactorily filled by the determination of the true calibre of the urethra.

As regards the extension of time employed in performing lithotrity, as long ago as March, 1876, he had operated in the case of a patient sixty-four years of age, affected with a phosphatic calculus, whom he had seen in consultation with Dr. Mann, of Brooklyn, and had occupied an hour and ten minutes in the crushing and removal of the stone. In November, 1877, he had occupied an hour and a quarter in a similar operation at Sag Harbor, Long Island, and he felt sure that many other surgeons had had the same experience before Professor Bigelow published his first paper. He claimed, therefore, that the latter did not discover the tolerance of the bladder under surgical procedure. Bigelow did much more than this, he said. He utilized all the points of knowledge that had been previously gained in regard to this whole subject, and achieved one of the most brilliant surgical triumphs of modern times.

The smallest catheter that ought to be used in the operation, he thought, was No. 27, of the French scale, and the largest, No. 32. The relation of the size of the urethra to that of the penis was practically

invariable, and if in any case there was any deviation from this fixed relation it was abnormal. He had seen some cases in which the urethra was larger than the size indicated by that of the penis, but not a single one that was smaller, unless it were narrowed by stricture or other abnormal condition. It was very important before operating to get the urethra in the best possible condition, as the great danger was the liability to injure its deep portion, and consequently, if there were any obstructions they should, by all means, first be removed.

Professor Bigelow believed that the evacuating tube should not be less than twenty-five, or more than thirty-one, millimetres in circumference. It was surprising what a great difference a very few millimetres made in the capacity of the tube for quickly passing the débris. Thus, in an experiment which Dr. Otis had made with crushed coral, a substance which very admirably represented the mixed calculus, a catheter of thirty millimetres calibre carried 300 grains in thirty seconds, while in the same length of time a tube of twenty-seven millimeters carried only 180 grains. The tube should be two or three sizes smaller than the urethra, and Bigelow preferred the straight catheter to the curved. The objection to the straight instrument was the greater difficulty of introduction, especially where there was any prostatic enlargement, and in order to facilitate the introduction in the latter class of cases Dr. Otis had devised a straight catheter with a small curve just at the extremity.

Although Professor Bigelow had insisted that a large catheter was the one great requisite for successful lithotrity, he believed that an important factor in the success of the operation had been the more powerful evacuating instrument that he (Bigelow) had been the first to employ. The objections to Bigelow's first instrument were that it permitted more or less return of the débris, and the too free passage of air into the bladder. In 1879 Sir Henry Thompson devised an apparatus in which the débris dropped directly into a receiver below, and in which there was a metallic, instead of flexible, connecting tube provided with a stop-cock. This was open to the same objection of allowing a return of the fragments into the bladder, and, accordingly, in 1880, he made some changes in it with a view to prevent this. The main idea of Sir Henry Thompson was to get as short and direct a route as possible between the bladder and the receiver. As to Professor Bigelow's early instrument, Dr. Otis had used it for a long time, and almost always with the most satisfactory results, and in the present year Mr. Reginald Harrison, of Liverpool, had stated that after trying several modifications he could not but express his satisfaction with Bigelow's original instrument. But Bigelow had from time to time been improving his instrument. Thus he modified it so that the fragments entered the bulb at the side, and not at the top, of the bulb, and also introduced a ball-valve and strainer to prevent the return of the fragments. The device was efficient, but rendered the apparatus more complicated, and added greatly to the expense as well as to the length of the route between the bladder and receiver. After speaking of various other modifications which had been made Dr. Otis stated that in the early part of 1883 Professor Bigelow had achieved a signal success with his latest instrument (which he exhibited), in which the route of the fragments was greatly shortened, and the return of the débris was

prevented by a strainer prolonged to the centre of the bulb. He had used this instrument on one occasion, and its action seemed to be perfect. Sir Henry Thompson's latest instrument, in which the route was as direct as possible, was also described.

Dr. Otis then went on to say that the weight and expense of the Bigelow and Thompson instruments had occurred to him as objections, and accordingly he had devised, with the assistance of Messrs. Tieman & Co., an apparatus which was lighter, simpler, and much less expensive. It consisted of a bulb of strong, annealed glass, two inches in diameter, into one side of which a metallic tube, connecting with a rubber air-bulb, was introduced, the tube extending up to near the top of the chamber. On the other side entered the tube from the evacuating catheter, which curved downward, and was designed to carry the débris nearly to the bottom of the bulb, below which was a glass receiver attached by a strong bayonet joint. A stop-cock cut off the entrance of air into the bladder. The apparatus could be filled either by pouring water into the bulb or by first exhausting the air from it, and then allowing it to fill itself. Having described the instrument, Dr. Otis exhibited its mode of working by introducing the evacuating catheter connected with it into a bottle representing the bladder, which contained a considerable quantity of crushed coral to represent the débris of a calculus. In a short time all the fragments of coral were successfully carried to the receiver, and there was no return of them whatever into the bottle representing the bladder. The fact that there was no tendency to return was stated to be due to the direction of the current, depending on the relative position of the orifices of the two tubes in the bulb. In this instance a catheter of thirty millimetres calibre was used. It was explained that no strainer or other apparatus was required to prevent a return of the débris into the bladder. This was certainly an advantage because the strainer was liable to become clogged with mucus, and it was essential that it should always be kept very clean. In conclusion Dr. Otis said that he had ascertained that his instrument could be made for exactly half the price required for Dr. Bigelow's.

The President, DR. BARKER, remarked that it might be of interest to state that the oldest living physician in Boston, who was also a professor at Harvard, had recently been relieved of a very troublesome calculus by Dr. Bigelow's operation. He also read a letter of regret at not being able to be present from Dr. James L. Little, who said that he had performed the operation a large number of times with very gratifying success, and that in his last case he had crushed a stone an inch and a half in diameter in a patient seventy-seven years of age.

DR. EDWARD L. KEYES, being called on by the chair, remarked that he did not think Professor Bigelow had ever made any claim to have discovered the tolerance of the bladder. This was one of the first things that Civiale and others had found out in their operations. Civiale sometimes occupied half an hour with a sitting, but as he could not evacuate, and as his instruments were comparatively rough, he found by experience that it was much more advisable to employ only short sittings. As to the increased size of the tube now employed, he thought this was undoubtedly the result of the researches of Professor Otis in regard to the calibre of the urethra; but although Professor Bigelow claimed that this was the essential point in the success of his

procedure, he did not believe that such was really the case. The birth of lithotripsy in the brain of Bigelow was due to a crystallization of all the ideas contributing to that grand result which had previously existed in the profession, and one of the principal elements in its success was the increased efficiency of modern instruments. The operation could be performed perfectly well with a No. 12 tube, English scale; though, of course, the larger the tube, the shorter would be the time required for the evacuation. He had never yet had occasion to cut a urethra as a preliminary to the operation, except just at the meatus; but if he had a case of stone with organic stricture of the urethra, he would prefer the external incision to lithotripsy. So far as he knew, the only operators of high authority who used very large tubes were Bigelow, Otis, and Harrison; most others fearing that possible injury to the urethra might result from their use. As to Professor Otis's new instrument, he had seen it for the first time only that morning; but, as far as he could judge, it would add, if possible, to the professor's already brilliant reputation for mechanical ingenuity. Its efficiency, simplicity, cheapness, and portability, seemed to him simply admirable, and among its special advantages were the substitution of air-pressure for water-pressure, and the fact that the glass bulb enabled the operator to see the exact condition of affairs at all stages of the operation. Whether the apparatus would work as efficiently where there was a quantity of fine phosphatic dust to be evacuated, as in cases where the fragments of calculus were larger, he was not prepared to say.

DR. OTIS, in reply to Dr. Keyes, stated that he thought that Sir Henry Thompson ought to be added to those who sometimes, at all events, resorted to the larger tube, as he had repeatedly used a No. 30. When there was prostatic enlargement it was necessary to proceed with great caution, and he himself always inculcated the rule to use as small an instrument as would evacuate the fragments in such cases. When it was necessary to incise the meatus or cut a stricture as a preliminary to lithotripsy, it was always advisable to do this some little time before the main operation, so as to allow the parts to heal before the latter was undertaken. It was his practice always to clear the urethra of obstructions, if any existed, before performing lithotripsy. In regard to his instrument, the advantage of having so small a bulb was on account of its portability and the diminished danger of its breaking. He had omitted to say that whenever it was desirable, the apparatus could be inverted and the bulb filled directly with water.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

STATED meeting, Thursday evening, September 27, 1883. The President, DR. JAMES TYSON, in the chair. DR. SEILER presented a specimen of

POSTERIOR NASAL HYPERTROPHY IN SITU, TOGETHER WITH AN EXOSTOSIS FROM THE VOMER.

The anatomical relation of the parts on the right side of the nasal cavity was perfectly normal.

When, however, this partition was removed, a very marked enlargement of the posterior end of the lower turbinated bone on the left side was noticed, which proved to be a posterior hypertrophy.

On the left surface of the vomer a projection was also seen, which proved to be an exostosis, the existence of which, in nasal disease, is denied by some authors. The tumor-like projection into the nasal cavity consists of a hypertrophy of the erectile tissue underlying the nasal mucous membrane.

Its presence is due to a long-continued catarrhal inflammation which, by the infiltration of its inflammatory products into this cavernous tissue, has distended the venous sinuses, and has increased the thickness of the connective tissue walls of the caverns, so that when they are empty of blood a perceptible swelling or tumor still remains, as is seen in the specimen.

The reason why these hypertrophies occur more frequently at the anterior or posterior ends of the lower turbinated bones must be looked for in the fact that the blood, favored by gravitation, distends the caverns of the erectile tissue more easily under the excitement of local irritation in these localities, and that the anterior as well as the posterior ends of the lower turbinated bones, forming the entrance to the in- or outgoing air current, are more liable to irritation by irritants contained in the respired air than any other portion of the nasal cavity.

Dr. Seiler said that, of late, great interest had been taken in the pathology of hay fever, particularly in its relation to the pathological condition of the nasal cavities, and that great success had attended certain methods of treatment. In hay fever there is general hypertrophy of the mucous membrane of all the turbinated bones and septum nasi. The membrane is thickened and puffed up, thus occluding the nasal cavities. The inhalation of impure air, dust, etc., will produce irritation and cause asthmatic attacks. The pressure exerted by foreign growths or hypertrophied normal tissue in the nares also causes asthmatic symptoms.

As regards the possibility of cure, we may say that all sufferers from hay fever invariably have hypertrophic nasal catarrh, and if you, during the winter, remove the hypertrophied tissue the hay fever will not return during the summer. This removal is done either with a dental drill or the cautery knife.

He did not believe it to be due to rotten grains, as the worst cases occur in traveling from coal-dust, etc. The disease is due chiefly to the hypertrophies. Sometimes the attack comes on frequently, and lasts only a very short time, the patient in the mean time being well. He had seen a number of such cases. In one case a young lady was attacked at every menstrual period, the disease lasting a half hour. There was every symptom present: sneezing, watering of the eyes, running and clogging up of nose, difficulty in breathing, etc. In another instance, a gentleman had the same kind of seizures, but they were accompanied with intense pain in the nose. By surgical means he succeeded in relieving him very much. Instead of one attack in three or four days, he has had but one in four months. These cases show how localized hypertrophies can produce spasmodic attacks.

DR. J. T. ESKRIDGE presented specimens of

MALIGNANT GROWTHS OF THE STOMACH AND OVARIES,

with the following history:—

Mrs. A., aged thirty-two years; married; born in Germany; had done hard service-work all her life. She had had two children, both living and healthy; three

and two years old respectively. Her husband was a drunken, dissipated fellow. Her children were born at term. Neither she nor they presented any evidence of syphilis. She had had no abortions. Her confinements had been normal. After the first she remained in bed ten days, but after the last only five, as she was compelled to go out washing to earn bread for herself and children. Until her last confinement she had always felt well, and weighed, two years ago, one hundred and forty pounds; but soon after the birth of the child she began to lose flesh and strength. So far as she knew, none of her relatives had suffered from cancer or tuberculosis. In the latter part of the year 1882, she fell on her stomach and hurt herself considerably. Soon after the accident her abdomen became painful and began to swell. In March, 1883, she was admitted to the Episcopal Hospital. She remained in that hospital several weeks, and during her stay there her abdomen was twice tapped, a large quantity of a straw-colored serous fluid having been drawn off each time. She entered the hospital of the Jefferson Medical College, very much emaciated, July 1, 1883. Dr. Getchell twice drew off large quantities of fluid similar in appearance to that obtained from her while she was in the Episcopal Hospital. She came under my care July 17th. She was very weak, and her appetite was poor, but her stomach was tolerant, and had been so during her entire illness. Her abdomen was greatly distended, and slightly painful to palpation. No nodules could be felt in any portion of the abdominal cavity. No heart or lung trouble was detected. The urine was normal in appearance and quantity. The temperature over the abdomen was a little higher than in the axillæ, in each of which it was 99.4° F. A few days later, about three gallons of a yellowish serous fluid were drawn from the abdominal cavity. After the operation the abdomen was flaccid and tolerant of manipulation. A tumor just below the ensiform cartilage of the sternum was felt. It was thought to be connected with the stomach. A tumor, much larger on the right side than on the left, was observed in each ovarian region. The liver and spleen presented, so far as I was able to detect, no evidence of disease in these organs. Occasionally she was troubled by diarrhœa. She grew weaker, and her abdomen more tender. She died from asthenia, August 1, 1883. Her stomach remained tolerant to the last. From July 27th to August 1st, her temperature ranged from 100.4° to 102° F. She was treated mainly with anodyne and supportive measures. Anti-syphilitic treatment was at one time employed, but without any improvement.

Sectio Cadaveris (twenty-one hours after death). Body greatly emaciated, the adipose tissue being almost completely absorbed. Parietal layer of peritoneum thickened, opaque, and quite firmly attached to abdominal muscles. Its internal surface is very rough, and presents a rugose appearance almost as well-marked as the mucous membrane of a healthy stomach. The rugosed surface is made up of layers of firmly adherent lymph, and is studded throughout with deposits of pigment. The peritoneal cavity contains about one and a half gallons of a straw-colored serous fluid. Bowels are distended with gas, and variegated externally by deposits of old lymph. Stomach is distended with fluid. It is very small, capacity not more than a pint. It is firmly bound to all adjacent structures by bands of old and recent adhesions. Externally it presents the appearance and feel of an old cystic kidney.

Its length is about eight inches; greatest breadth three inches. The walls of the pyloric two thirds of the stomach vary from three fourths of an inch to one quarter in thickness, the calibre of this portion not being more than one and a half inch in diameter. The mucous surface is smoother than normal, and anæmic in appearance. While the growth encircles the stomach at its pyloric end (two thirds), its thickest portion is along the lesser curvature. The walls at the cardiac end of the stomach are thinner than normal, easily torn, and present several ecchymotic spots. The pyloric orifice is greatly dilated, and admits of all the fingers of one hand being passed up to their second joint.

The calibre of the upper portion of the duodenum is two or three times larger than normal. The walls of the bowel at this point are thickened, but the thickening does not extend more than two or three inches when the bowel resumes its normal appearance. General adhesions are found, binding together the greater and lesser bowels, but at no point are their calibres materially lessened. The caput coli is much enlarged, and its appendix is curled upon itself, presenting a snail-like appearance.

A spherical growth, about five inches in diameter, is connected with the right ovary. About two thirds of the tumor is formed by a cyst whose walls are about an eighth of an inch thick. The inner surface presents a cheesy appearance from broken-down exudated lymph. The contents of the cyst are a dark, muddy liquid. The remainder of the tumor is made up of a caseous-like substance, in which a cyst about the size of a walnut is found. Connected with the left ovary is an ovoidal growth, about three inches in length and two in breadth. The tumor is made up of a fibro-fatty substance. The womb is quite small, and apparently is not the seat of any disease.

The stomach seems to be the point of chief interest in the above case. The absence of nausea, vomiting, eructations, and other symptoms of gastric indigestion, in a contracted stomach, the pyloric two thirds of whose walls are infiltrated by a neoplastic growth, can be explained only, I think, by the presence of the enormous dilatation at the pyloric orifice. This condition of affairs permitted indigested food to pass from the stomach into the bowel readily. Gastric digestion was apparently almost *nil*, the fluids in the intestine performing their own function and that of the gastric juice.

It is probable that the growth in the stomach is secondary to those of the ovaries, and that the peritonitis followed by ascites was occasioned by the fall received eight months before the death of the patient.

THE PRESIDENT said that he had never seen a case of disease of the stomach with so much thickening of walls and contraction of the cavity combined with so much dilatation of the pyloric orifice.

DR. FORMAD said that, judging from the specimen, without a microscopic examination, he did not think there was any trace of cancer either in the ovaries or stomach. It looked more like a case of chronic fibroid gastritis. He has seen several cases of that kind. They are described and figured by Thierfelden in his *Pathological Atlas*. He also has in his possession a specimen of the affection. The ovaries also look fibrous, and malignant disease of the ovaries is usually sarcomatous. In fibroid disease of the stomach the muscular coat is affected by fibroid changes, as is also the mucous coat.

DR. ESKEIDGE, in reply, said that after examining the specimen carefully he felt that he would not be justified in calling it either sarcoma or carcinoma, and so called it a "malignant growth." There were no metastases. There was an absence of vomiting, notwithstanding the extent of the disease.

THE PRESIDENT said that in one of his cases, with all the symptoms of cancer of the stomach, post-mortem examination showed what was called fibroid thickening by one pathologist, but which Dr. Formad and himself regarded as cylindrical epithelioma.

The specimen was referred to the Committee on Morbid Growths for examination.

DR. DE SCHWEINITZ also exhibited specimens of

RECURRENT SCIRRUS OF THE MALE BREAST,

taken from the person of Moses W., aged sixty, a native of Ireland, and at the time of operation an in-patient in the University Hospital. He was of dark complexion, had a somewhat cachectic look, of bilious constitution, and rather melancholic temperament. His family consisted of ten members. Father and mother died in old age; of his brothers and sisters he had little knowledge, but, as far as he knew, none of them ever suffered with carcinoma in any form. Four and a half years ago a small kernel appeared beneath his left nipple. Gradually the nipple retracted, and the tumor slowly increased in size, until, at the end of a year and ten months, its dimensions were those of an orange. He then applied for treatment, and a Belfast surgeon removed the growth. Eight months later the growth began to recur in loco, the first nodule appearing in the scar at the point where a stitch was passed in the approximation of the wound. During August of this year he came to the University Hospital, and Professor Ashhurst removed the secondary growth, and also some enlarged axillary glands, which the patient claims were present at the time of the original operation. The patient denied any injury or inflammatory trouble in his breast previous to the appearance of the original tumor. He also denied that this breast had been larger than its fellow, or that it had ever secreted milk. Macroscopically the growth is seen to be composed of two portions, the one, larger, is a fibrous mass, rising above the level of the epidermis, brownish-red in color on the surface, and yellowish-white within, and of moderate consistence. The skin in the immediate neighborhood at the time of operation was of a dusky hue. The other and smaller portion is a nodule situated beneath the skin in the subcutaneous connective tissue, and is of similar color and consistence. A section under the microscope shows a connective-tissue frame-work, composed of round and oval alveoli, and scattered through it some spindle and round cells. These alveoli are quite closely packed with polymorphous epithelium, but chiefly of a spheroidal type. Much yellow elastic tissue is present in all sections. The skin in the neighborhood of the larger mass is involved in the carcinomatous process. The tumor is an ordinary scirrus or spheroidal-celled carcinoma.

It is needless to speak of the interest which attaches to carcinomata of the male breast, and of their infrequency of occurrence when compared with similar growths in the female mammary gland. I need only refer to Prof. S. W. Gross's interesting exhibit and remarks upon this subject in this Society's Transactions, vol. vi. I have mentioned that the tumor recurred at the point where a stitch was passed. It is

permissible to speculate whether, if the surgeon's knife had removed a larger area of skin, this local recurrence would have been prevented or at least delayed. It would not be an uninteresting study to make sections of the edges of flaps that are about to be approximated after the removal of malignant growths, and note whether any morbid manifestations would present themselves, ready to be lighted up in active growth by any irritation, as in this instance, by the passage of a suture. At all events this may serve the purpose of another warning that all incisions for such purpose should be carried as far into healthy tissue as is possible.

DR. W. E. HUGHES presented some specimens from a case of

PHTHISIS WITH ABSENCE OF PARIETAL PERICARDIUM
AND MALPOSITION OF LIVER,

with the following clinical history: C. L., white, aged thirty-three, was admitted to the University Hospital, July 21, 1882. He had been previously in the Philadelphia Hospital, under the care of Dr. E. T. Bruen. By occupation a carpet weaver, he had done of late years general laboring work, often much exposed to weather. He had been a moderate drinker and user of tobacco. There was a distinct history of asthma in the family, both mother and maternal grandfather having been affected, but no phthisis. When eleven years old he had pneumonia, and since then winter cough. Till three years before being seen he was well and strong, then the cough became continuous, and flesh and strength began to fail; a year afterwards dyspnoea developed; at first produced only by exertion, it soon became constant, and a most urgent symptom in the case. In the fifteenth month preceding admission to the hospital he had had two or three attacks of excruciating pain about the fifth interspace to the right of the sternum. The attacks would begin suddenly, last a few minutes, and disappear as suddenly as they came, leaving him completely exhausted. On admission to the hospital he was weak, somewhat emaciated, breathless, face sallow, with a circumscribed flush on left cheek. Expression cheerful. Left pupil larger than right; both responded well to light. Cough constant, rather dry; some muco-purulent expectoration in the mornings; dyspnoea constant, with marked exacerbation on exertion. Appetite and digestion poor; bowels irregular. On the right side of the chest a distinct prominence, reaching its greatest elevation at the fifth interspace, midway between the sternum and nipple. Over right chest poor movement, with flattening at the apex. At the apex there were evidences of a cavity, while from the third rib to the base, and from the sternum to the anterior axillary line (over the area of prominence just spoken of), there was flatness, with absence of vocal resonance and fremitus; posteriorly, dullness with mucous râles and scattered friction sounds.

On the left resonance was impaired at the apex, and respiration blowing, elsewhere normal. The apex beat of the heart was in the fourth interspace, one half inch outside of the left nipple. With the systole could be noticed a slight localized retraction of chest wall immediately inside the apex beat. Cardiac dullness extended from the right border of sternum two inches to the left of the sternum in the second interspace, two and a half inches in the third, and three and a half inches in the fourth. First sound weak and valvular. Second pulmonary sound accentuated and re-

duplicated. Liver dullness extended to the margin of the ribs anteriorly, continuous above with the flatness in the chest; posteriorly it was normal. A diagnosis of chronic plastic pleurisy with consequent phthisis was made, and the needle of an aspirator introduced about the middle of the area of flatness with negative results. The needle, as was shown after his death, must have punctured the liver. While in the hospital his condition remained much as it was on admission. A most interesting symptom was one connected with the pupils. They were usually unequal, sometimes the right, sometimes the left, being the largest. When first seen the flush was limited to the cheek corresponding with the largest pupil.

March 15, 1883. After a fall he had a slight pulmonary hæmorrhage, and died in fifteen minutes of apnoea, the heart continuing to beat after the respirations had ceased.

Autopsy (twelve hours after death). The upper right lobe of the lung had been converted into a cavity with contracting walls. The upper part of the middle lobe had undergone marked fibroid change. The rest of the middle lobe and all of the lower were collapsed, congested, pushed back by the liver, which lay in front of them. The lung was universally adherent to the chest wall and diaphragm. The left lung had small masses of cheesy deposit at its apex, with the remaining substance healthy. It was less adherent than right. The heart was normal in size and position. The valves and great arteries were normal. What lends the case its chief interest was a complete absence of pericardial sac, the heart lying free in the left pleural cavity, its surface in contact with the left visceral pleura. Toward the apex there were a few fibrous bands connecting the heart with the lung and diaphragm (evidently the results of old pleurisy), while toward the base it was impossible to separate the heart and lung on account of the density of the adhesions. The serous covering of the heart was directly continuous with the visceral pleura. From the diaphragmatic pleura immediately beneath the heart was a fold of serous membrane one inch broad, three inches long, apparently an abortive attempt at the formation of a pericardial sac. No such formation could be demonstrated at the base, on account of adhesions between the heart and lung. The liver presented a curious departure from the normal position. The right lobe about its middle turned sharply upon itself, and, carrying the diaphragm with it, extended upward to the third rib. This accounted for the prominence and dullness in the chest before noted. The gall-bladder was carried with the liver, its fundus pointing upward. The left lobe was very small, and was not carried up with the right. On section the liver showed a nutmeg appearance. The other organs were normal.

DR. EDWARDS said that the misplaced liver had been punctured several times by the attending physician, while he was his resident. The idea was to see if there was any accumulation of fluid at the place on the chest where resonance was absent.

DR. ESKRIDGE said that he had a case in which he thought the pericardium was incomplete, but he came to the conclusion that it was normal; the anterior layer of the pericardium having been removed along with the sternum, to which it was afterwards found attached.

DR. FORMAD said that he helped to make the autopsy, and was perfectly sure that the parietal layer was

absent. On removal of sternum, the heart was visible. The parts were very carefully investigated. The heart was seen lying in the left pleural cavity. On looking up the literature, he found in Virchow's *Archives* three or four such cases recorded. In this case there was some anomaly of the diaphragm and displacement of the liver. There was a healed phthisical cavity at the top of the right lung, and it is possible that in healing the scar may have caused the retraction of the diaphragm and ascent of the liver.

DR. MUSSER had had two cases in which marked retraction of the chest wall occurred at each heart-beat. In these cases there were no pericardial adhesions. Clinically, he regarded retraction of the chest walls as of no value in the diagnosis of pericardial adhesions.

DR. WOODBURY said that he saw in the Pennsylvania Hospital, two cases of absence of a part of the pericardium. One was congenital, and the other was due to inflammatory action. In the specimens presented this evening, there may have been inflammatory adhesions early in life, and later on rupture of these and of the pericardium.

Recent Literature.

Transactions of the Colorado State Medical Society at its Thirteenth Annual Convention, held in Denver June, 1883.

Transactions of the New Hampshire Medical Society at its Ninety-Third Annual Session, held at Concord, June 19, 20, 1883.

These two pamphlets, representing the work of one of the oldest and one of the youngest State societies, present an interesting ground of comparison, and suggest that Colorado, though a new State, has drawn its population from the oldest centres of civilization, and in medicine, as in other departments, has many workers of first-rate ability. Among the contributions we notice a careful analysis of Signal Service statistics with reference to Colorado climate, by Dr. Samuel A. Fick, of Denver, in which the writer supplements his personal experience as a valetudinarian by figures showing the relative humidity, temperature, and other elements which contribute to give Colorado climate the value which many have found in it for incipient phthisis. In the New Hampshire volume we notice as of special interest the presidential address of Dr. A. H. Crosby, of Concord, N. H., and the other contributions are of value.

A Text-Book of General Pathological Anatomy and Pathogenesis. By ERNST ZIEGLER, Professor of Pathological Anatomy in the University of Tübingen. Translated and edited for English students by DONALD MACALISTER, M. A., M. B. New York: William Wood & Co. 1883. 371 pages.

The English edition of this valuable work has already been noticed in the JOURNAL,¹ and it only remains to welcome an American reprint as placing the work within the means of a larger number of readers. It is to be regretted, however, that this has been done by using the worn-out plates from England, and printing on very poor paper. This edition is only to be recommended to those who cannot afford to purchase Macmillan's publication.

¹ Vol. cviii., p. 398.

Medical and Surgical Journal.

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LOCALIZATION OF CEREBRAL FUNCTIONS.

PROF. DAVID FERRIER, whose name is so intimately connected with the above subject, having been awarded the Marshall Hall prize, delivered recently before the Royal Medical and Chirurgical Society, at its first meeting this season, an especially lucid and interesting address upon the Progress of Knowledge in the Physiology and Pathology of the Nervous System. Many of our readers will remember the persecution before the courts to which Professor Ferrier was subjected by the anti-vivisectionists just after the meeting of the International Congress at London, on account of the experiments upon two monkeys, performed to prove to other physiologists his views in regard to cerebral localization. The address (reported in full in the *British Medical Journal*, October 27th) deals mainly with the gradual development and present position of this theory of localization of cerebral functions.

It opens with an acknowledgment of the Marshall Hall prize, and a eulogistic account of Marshall Hall's investigations into the nature and conditions of reflex action, a subject of such importance that its elimination would derationalize the better half of pathology and therapeutics. Not long prior to this investigator's study of the spinal cord and medulla oblongata, Flourens was engaged in his memorable researches on the physiology of the cerebral hemispheres. The doctrines of Hall, with modifications in detail, are those which still prevail, while those of Flourens, though having exercised an enormous influence on clinical medicine and pathology, are open to extensive criticism. Flourens held that the organ of the mind like the mind itself was one and indivisible, there being no differentiation of function, each part being capable of exercising every function pertaining to the whole. These views were once generally accepted, but some observers saw in certain clinical phenomena—as the occurrence of limited paralyses following limited lesions—facts inexplicable by this theory. Among these observers was numbered Dr. Hughlings Jackson, to whose keen perception Professor Ferrier accords the highest praise. Fritsch and Hitzig subsequently inaugurated a new era by showing the results of electrical irritation of different regions of the cerebral hemispheres.

The question of localization of cerebral functions was brought to a crisis at the International Congress of 1881. Goltz, as the champion of the Flourensian

system, while considering the cerebral cortex the seat of the higher intellectual functions, maintained the following views: (1.) Localized cerebral lesion cannot cause paralysis of any muscle or sense; (2.) Extensive removal of large portions of the cortex, however, causes defective perception; (3.) Destruction of the parietal regions causes permanent awkwardness and defective tactile sensibility; (4.) Removal of the occipital lobes causes greater dementia than that of the parietal lobes. The dog shown by Professor Goltz seemed in essential particulars to corroborate his theories. Against Goltz's dog were set the two famous monkeys, one showing total hemiplegia following destruction of the so-called motor tract, the other completely deaf from lesion of the superior temporo-sphenoidal convolution.

The seeming confusion resulting from contradictory results Ferrier points out should not lead us to ignore the logical results of experiment. Pigeons and frogs after removal of entire hemispheres behave much as before the operation. Dogs are absolutely powerless after the same injury. These facts illustrate the different degrees among different orders of animals in the part played by the cerebral hemispheres. If it is difficult with some animals to gauge the result of loss of whole hemispheres, it may well be difficult to show the effect of removal of a part. The fallacy in Goltz's experiment lay in the incomplete destruction of the motor area (afterward demonstrated on the brain), the remainder sufficing for incomplete motion.

Clinical researches in this connection are less reliable than physiological experimentation, but the experience of most clinical observers seems to favor the localization of cerebral functions.

Assuming then the general acceptance of the theory of localization, is this localization of centres a matter of accident, or is it dependent on structural peculiarities rendering each centre distinct from others; or is the brain-crust divided into fields each of which, though yielding some kind of produce, usually may, if need be, yield any other; or is it divided into fields each of which yields most of one kind of produce, but more or less of every sort? Each of these suppositions has its advocates. The indifferent or accidental theory is used by some to explain, by compensation, the recovery of motion after supposed complete destruction of the motor areas. This is probably fallacious reasoning, for complete destruction of certain portions of the cortex are followed not only by lasting paralysis, but also by secondary degeneration of the pyramidal tracts, a result following lesion of no other region of the cortex. The histological differences between the nerve cells of different regions of the brain, moreover, points to the same conclusions. Again as regards the region related to the organs of sense, destruction of certain cortical regions of both sides, for instance, causes blindness and atrophy of the optic nerves, establishing the final origin of the optic fibres, but the centres for the other senses do not rest as yet on so established a basis. The fact that the exact limits of the fields have not been determined is no argument against the theory of localization.

The following are the regions concerning which the least controversy exists: the convolutions bounding the fissure of Rolando have a special relation to the motor powers; the centres of hearing are in the superior temporo-sphenoidal convolution, and certain clinical observations favor a causal relationship between lesions of this region in the left hemisphere and word-deafness, though no case has been observed in man comparable to the deafness in the monkey produced by destruction of the auditory centres; the differences of opinion regarding the visual centres are mostly confined to the relations of certain cortical to certain retinal regions. It is probable that isolated affection of vision may be connected with cortical and sub-cortical lesions in the occipito-angular regions.

The centres of smell and taste are less definitely settled, but the greatest difference of opinion exists regarding the centres of muscular and general sensibility. Some place them in the motor tract; Ferrier holds them to be entirely distinct, occupying the sub-cortical region. Clinical research is of the utmost value in settling this question on account of its importance in the diagnosis of cerebral disturbance.

Tested by the standard of practical utility, the benefits of this doctrine of cerebral localization have been absorbed into medical science itself. It has sharpened clinical vision; it has given a decision to clinical and pathological descriptions; it has cleared our conceptions as to the significance of numerous symptoms, and is every day bringing us nearer to that which Virchow has termed the goal of modern science, namely, localization of disease. There are also already signs that we are within measurable distance of the successful treatment by surgery of some of the most distressing and otherwise hopeless forms of intracranial disease, which will vie with the achievements of abdominal surgery. There is no more reason, with stringent antiseptic precautions, for shrinking from opening the cranial than the abdominal cavity. Apart from secondary inflammation and its consequences, which can be absolutely prevented, there is no risk to life from even extensive destruction of the cerebral hemispheres. The records of our daily experience of disease and injury of the brain show that considerable portions of the brain substance may be destroyed without great danger to mental stability, and with the exception of certain functions, arrogated by the left hemisphere, we have practically for mental purposes two brains. Paralysis, as well as other complications incidental to all surgical procedures, may ensue after cerebral operations, but the choice often is not between this and some other treatment, but between these risks and certain death,—a choice over which few would hesitate.

THE CHOLERA GERM.

It is already a number of weeks since the unofficial announcement by cable of the discovery of the cholera germ by Koch and his associates in Egypt, whither they were sent by the German government to study the disease. Such an announcement coming from

Koch himself, whose accuracy and prudence are now well known, would command attention, but as a mere news item it scarcely deserved serious consideration. Koch's own report upon his observations is now at hand, and exhibits his characteristic caution. It seems that cholera was already declining in Alexandria, where the commission pursued its studies, when it arrived there; only twelve cases could therefore be investigated during the disease, and ten examined after death. The only distinctive result reached was the verification of the constant presence in the intestinal walls, and principally in the walls of the lower part of the small intestine, of a micro-organism of the bacillus type, which had previously been observed by Koch in specimens from cholera victims sent him from India, and which he had hitherto thought might be attributable to putrefactive changes. These micro-organisms were isolated and propagated in pure cultures, according to Koch's now well known method. The next essential link in the chain of proof that these constitute the specific germ of cholera is still wanting. Koch failed to reproduce cholera by inoculation of the lower animals with his cultures. This failure may be owing to an immunity of the animals to the disease; it may be owing to the same attenuation of the virus which was reflected in the declining disease in Alexandria; or it may very well be that this bacillus is after all not the specific microbion wanted. Koch's mind is of too scientific a cast not to appreciate these alternatives, and he has shown himself too candid not to announce them.

The commission, with the consent of the German government, has gone on to Bombay to pursue its investigations under more favorable circumstances, and with ample material. In the mean time the profession and the public can afford to await the official announcement of the result of its labors.

"REGULARS" AND "IRREGULARS" OF THE DAILY PRESS.

THE little excitement among our esteemed daily contemporaries in Boston, which manifested itself recently upon the publication of the enemy's campaign documents, in the form of advertisement, by one of their number toward the close of the recent exciting political campaign in this State, caused us, we may confess, some little amusement. We read the mutual criminations, recriminations, and definitions of position and propriety, and tried, by reminding ourselves that perhaps all men are not equally fitted to decide every question, to abstain from immediately settling the merits of the controversy off-hand. But it did occur to us that our neighbor's ox was now being gored, and the process seemed to evoke not indistinct cries of "regular" and "irregular," "code" and "no code," tory and liberal. At the same time the suspicion presented itself that very likely a contemporary was being persecuted, and whether as descending from the Puritan we ought not without more ado to give him our countenance and support.

Why should not industrious, law-abiding, intelligent newspapers earn their livelihood in their own fashion, and cater to the tastes of an appreciative public in the way of advertisements, or anything else, without this antiquated jargon and mummery about "principles," and "standards," and "regularity," and unwritten "ethical codes," etc., etc.? Cannot a newspaper manage its business in its own fashion, even if striving to increase its influence and profit by an uncalculated aberration, without these efforts to prejudice the public against it, and these intimidating prophecies of an enormous loss of circulation? Cannot a Massachusetts public be trusted to know what it wants to pay for?

The time is not far off when even esteemed daily contemporaries will be emancipated from all this sort of old-fashioned nonsense, which we are sorry to see encouraged by so large and respectable a part of them. People in this community were not born to be slaves, and they won't tolerate persecution of anybody or anything.

THE REMOVAL OF THE REMAINS OF WILLIAM HARVEY.

ON October 18th an exceedingly interesting ceremony took place at Hempstead, England, a village some fifty miles from London, on the occasion of the removal of the remains of the illustrious Harvey to a more secure and appropriate resting-place. Harvey died at the age of eighty, in June, 1657, and was buried in a vault with other members of his family under the "Harvey chapel," which was erected by a brother of William. The coffin was of lead, and bore an inscription which is still legible. The case itself, however, was in bad condition, and contained water most of the time; the lid had fallen in, and it is supposed that even the skeleton now no longer remains. Even in these damp and repulsive surroundings many pilgrims had found their way to the shrine, and the adjacent coffins were many of them flattened out by those who had stood upon them in order to decipher the inscription. Several efforts had been made to place the remains in a more worthy position, but had not been successful. Dr. B. W. Richardson had moved in the matter of having the body transferred to Westminster Abbey, and Dean Stanley wished to place it beside the remains of Hunter or Livingstone, but the illness and death of the dean put a stop to this undertaking. Last year the fall of a portion of the edifice again suggested that something should be done, and Dr. Richardson found that though the coffin had not been buried in the debris, it was fast dropping to pieces. On his report of these facts to the Royal College of Physicians, a committee was appointed to investigate the subject. This committee advised that the remains be kept at Hempstead, but that they be removed to the chapel above the vault. The necessary permission was obtained, and a sarcophagus of Carrara marble erected, the floor of the chapel having been strengthened for that purpose.

The following inscription was placed at the head of the sarcophagus:—

WILLIAM HARVEY
BORN 1578
DIED 1657

The following was engraved on one side :—

The remains of William Harvey
Discoverer of the Circulation of the Blood
were reverentially placed in this Sarcophagus by
the Royal College of Physicians of London
in the year 1883.

A leaden case was also prepared, in which might be placed the edition of the works of Harvey published in Latin by the Royal College of Physicians of London in 1766, and edited by Drs. Akenside and Lawrence. On one side of this was engraved :—

GULIELMI HARVEII
OPERA OMNIA
EDITA
MDCCLXVI

On the other side was inscribed :—

The complete works of William Harvey,
deposited October 18th, 1883.

A memorial bottle, hermetically closed, was also prepared for the occasion, and wrapped in lead. In the bottle was placed a memorial, engrossed on vellum. The leaden case inclosing the bottle had inscribed upon it :—

SCROLL.

Deposited October 18th, 1883.

The following is a copy of the memorial itself :—

"The body of William Harvey lapt in lead simply soldered was laid without shell or enclosure of any kind in the Harvey Vault of this Church of Hempstead, Essex, in June, 1657.

"In the course of time the lead enclosing the remains was from exposure and natural decay so seriously damaged as to endanger its preservation, rendering some repair of it the duty of those interested in the memory of the illustrious discoverer of the Circulation of the Blood.

"The Royal College of Physicians, of which corporate body Harvey was a munificent Benefactor, and which by his favour is the possessor in perpetuity of his patrimonial Estate at Burmarsh, Kent, did in the years 1882-83 by permission of the Representatives of the Harvey family undertake that duty.

"In accordance with this determination the leaden mortuary chest containing the remains of Harvey was repaired and as far as possible restored to its original state, and on this 18th day of October, 1883, in the presence of four Representatives of the Harvey family and of the President, all the office-bearers and many other Fellows of the College of Physicians (whose names are hereunto appended) was reverently translated from the Harvey Vault to this Sarcophagus raised by the College for its reception and preservation."

This memorial was signed by four representatives of the Harvey family and by the committee, which included some of the most illustrious names in English medicine.

The ceremony of the recommitment took place on St. Luke's day, and a special train conveyed the visitors down from London. The *British Medical Journal* thus describes the affair :—

"Dr. Allchin, the assistant registrar of the college, had gone before to Hempstead, to make the final arrangements for the carrying out of the programme of the day. Upon arrival at Hempstead, where a large number of persons were assembled, the President and the officials of the college immediately assumed their robes of office, and a visit was made to the vault to view the chamber and Harvey's shell with the other coffins lying there. Harvey's leaden coffin was then raised to the church-yard up an inclined plane made by

placing boards over the flight of steps. The eight Fellows of the college who acted as bearers, Sir Risdon Bennett, Drs. Owen Rees, Quain, Sieveking, Richardson, Shepherd, Duckworth, and Moore, then ranged themselves on either side of the coffin, and carried it through the church-yard, and up the nave and aisle, into the Harvey Chapel. Following the remains was a procession which included the four representatives of the Harvey family above named, the president of the college, carrying the silver emblem of his office; the college officers in their gowns; and the Fellows of the college mentioned above, conspicuous amongst whom were Drs. Acland and Paget, the Regius Professors of Medicine, in their scarlet robes; besides these gentlemen were Dr. Broadbent, Dr. Hubert Airy, Mr. George Eastes, and Mr. Stear. The remains of Harvey were then lowered into the sarcophagus, and Sir William Jenner placed the metal case containing the scroll sealed in a glass bottle, and the metal box containing the copy of Harvey's works, beside the leaden coffin in the interior of the sarcophagus. Thus within the last few years full honor has been done by Englishmen to the memory of Harvey. A noble statue, subscribed for by all classes of people has been erected in his birthplace, Folkestone, Kent, and now the Fellows of his own loved College of Physicians have, with their own hands, placed his remains in a tomb which will for centuries demonstrate to the world the admiration which, in 1883, they entertained for the signal services rendered to mankind by Harvey."

This ceremony, conducted with all that pomp and circumstance to which our English brethren cling so tenaciously in many matters touching their every-day life, but which is nowhere more religiously observed than in the formal proceedings of the College of Physicians, must have suggested a marked contrast to the spirit which actuated Harvey himself, when, in opposition to the crude physiological and theological fancies of his time, he dared boldly to invade the "spiritual" organ itself, and search curiously into its working in the living animal. Vivisection had far more excuse for being resisted in the seventeenth century than in the nineteenth, when two centuries of experience of the beneficent results of experimental research in the relief of suffering, by something like a rational idea of some of the vital processes, have plead its cause.

The maintenance of old forms, so far as it does not interfere with the work of to-day, is certainly defensible, and to one with a sense of the picturesque, quite justifiable. But the preservation of old-time prejudices, which Harvey was able in some measure to overcome two hundred years ago, to the obstruction of the scientific advancement of the world, is without excuse.

MEDICAL NOTES.

—The total number of medical students entering the London schools for the full curriculum this fall is 605. This number is seventeen below that of last year. St. Bartholomew's, as before, heads the list.

NEW YORK.

—At a meeting of the Medico-Legal Society held November 7th a resolution, proposed by Dr. R. J. O'Sullivan, was passed, requesting the Committee on School Hygiene to tender its co-operation to General Shuler, President of the Board of Health, in his efforts to improve the sanitary condition of the public schools. The officers of the Health Department have recently made a systematic inspection of the school-houses of the city, and reported that in many of them the air is poisoned by bad drainage, defective plumbing, or insufficient ventilation, or by all combined. In speaking upon the resolution Dr. A. W. Bell, editor of the *Sanitarian*, said that he hoped the movement would not end in smoke, as had been the case before. He thought the Board of Education was, perhaps, born in a state of incapacity to estimate the sanitary needs of the schools, and it was impossible for it to overcome this congenital difficulty. An examination some time ago to test the purity of school-room air had resulted in the discovery that there was more poisonous carbonic acid gas habitually present in them than in the prisons of the city. The Board of Education had passed a resolution requiring that there should be an average space of seventy cubic feet of air for each pupil, but this had never been carried out, not more than fifty cubic feet being at present the allowance in many of the schools. He believed that out of sixty thousand children three thousand had died during the last two years, smothered to death. Having called attention to the especially bad condition of one of the school-houses, he stated that the schools in Brooklyn were equally faulty. On motion of Mr. Hull a committee was appointed to report concerning the condition of the Brooklyn schools.

Prof. Charles A. Doremus then read a report of a toxicological examination for arsenic prepared by Dr. John J. Reese, professor of toxicology in the University of Pennsylvania, and incidentally alluded to the importance of guarding against the addition, by coroners or others, of alcohol as a preservative, or any other substance whatever, to parts to be submitted to the chemist for analysis, on account of the danger of the analysis being invalidated thereby.

—The Society of Medical Jurisprudence and State Medicine met at the hall of the Academy of Medicine on Thursday evening, November 8th, when a paper on Sunstroke was read by Dr. Charles A. Leale, which was discussed by Drs. C. S. Wood and E. C. Spitzka. The annual election of officers took place on the same evening, and resulted as follows: President, William Barnes, Esq.; Vice-President, Dr. E. J. Bermingham; Secretary, Dr. Nathan E. Bull.

—The coroner's jury which for some time past has been investigating the death of Mabel Curry, an infant eleven months old, which occurred at the Mount Vernon branch of the New York Infant Asylum, has just rendered the following verdict severely censuring the female physician in charge, and arraigning the management of the institution:—

"We find that Mabel Curry's death was due to a teaspoonful of ammonia administered by night nurse

Anna Howland, by mistake. We further find that Dr. Caroline G. Marr, the resident physician of the asylum, was promptly notified of the fact that the ammonia had been administered to the child, but that she neglected to give any antidote therefor or to take any measures to counteract the effect of said ammonia. At the time the ammonia was administered the child was not considered dangerously ill, and in our opinion her death was caused by the inexcusable, culpable, and criminal negligence of Dr. Caroline G. Marr. We also find that Dr. Caroline G. Marr certified that the child died from measles and bronchitis, whereas, in fact, the child died from the effects of the ammonia; of which, as we believe, Dr. Marr had full knowledge. We find, also, that from about August 1st to about October 1st an epidemic of measles, whooping-cough, and dysentery was raging in the asylum, with great mortality among the inmates, and that during that time Dr. Marr was the only regular physician in attendance. In our opinion the said Dr. Caroline G. Marr was not competent, either professionally or physically, to perform properly the duties which then devolved upon her, and many lives were sacrificed that might have been saved had proper and sufficient medical attendance been provided by the management of the asylum. We therefore believe it to be our duty to condemn and censure the management of said asylum for leaving the same during the epidemic unprovided with proper medical attendance."

During the inquest the night nurse, Anna Howland, testified that she had been appointed to that position by Dr. Marr, although she had never received any training qualifying her for its duties. She gave the aqua ammonia to the child in mistake for solution of quinine, and when informed of the occurrence Dr. Marr said that the ammonia would not do any harm. No medicine was given the child from the time it took the ammonia up to the time of its death, which occurred about twenty-four hours afterward.

Experts testified that a teaspoonful of aqua ammonia should be considered a fatal dose if administered to a child eleven months old. The town clerk of East Chester produced the certificate given by Dr. Marr, assigning measles and bronchitis as the causes of Mabel Curry's death, and testified that during the months of August, September, and the first half of October there were received sixty-eight certificates of death from the asylum at Mount Vernon. Three of the attendants at the asylum testified during the inquest that they have frequently seen Dr. Marr under the influence of liquor, and all three have been summarily dismissed from the institution in consequence.

It is intimated that the coroner, on account of the nature of the jury's verdict, will probably issue a warrant for the arrest of Dr. Marr on a charge of manslaughter.

—Dr. John McNeil, an old and highly respected practitioner of Jersey City, and one of the commissioners of the County Board of Health, died on the 9th of November. During the war he was surgeon of the Twenty-First Regiment of New Jersey Volunteers.

Correspondence.

LETTER FROM LONDON.

MR. LISTER ON FRACTURE OF THE PATELLA.

MR. EDITOR, — On the evening of Monday, October 29th, was inaugurated the one hundred and eleventh session of the Medical Society of London, the President, Sir Joseph Fayrer, in the chair.

After the usual balloting for members — one of our own countrymen, Professor Yandell, of Louisville, Ky., being elected to honorary fellowship — the President read his opening address, in which he stated that the present season bids fair to be of unusual interest and enjoyment, as already a large number of Fellows from all parts of England — among them Sir Andrew Clark — have signified their intention of presenting papers to the Society. The President suggested that a communication on *albuminuria* just at this time would be of great interest and importance.

After a short sketch of the Society's history, and an appeal to the members for still greater activity, the President closed his address with a few complimentary remarks to Mr. Lister, who was then introduced as the reader for the evening. The *Lancet* for November 2d will contain a full report of Mr. Lister's paper, which was on the Silver Wire Treatment of Transverse Fracture of the Patella, and of which the following is a short abstract: —

In 1873 Mr. Lister suggested to his house-surgeon that a suitable treatment for fractures of the olecranon and patella would be to wire the fragments of the bone together, as is done in certain cases of ununited fracture of the long bones.

Some time after this a case of fractured olecranon presented itself at the Edinburgh Infirmary, where Mr. Lister then was, and was operated upon. After cutting down to the bone the edges of the pieces were pared, a hole bored through the centre of each with a bradawl and a needle, and the two pieces brought together with silver wire, which was fastened by a full twist, and the ends left projecting from the wound. In due time complete union of the bone was found to have taken place; the wire was removed, and, the external wound healing rapidly, the patient soon regained the full use of his arm, and was able to return to his work of blacksmithing. One or two other like cases, equally favorable, were also reported. The wire used for the olecranon was of silver, and one four hundredth of an inch in diameter. Wire for the long bones should have a diameter of one tenth inch.

The reader then took up the subject of his paper, reporting seven cases of fractured patella treated by the wiring method, and presented six of the cases to the Society, the seventh case having been lost sight of soon after leaving the hospital.

In all these six cases perfect bony union of the fractured part was found to have taken place. The cases had been treated at the King's College Hospital within the past few years, the last one having been operated upon in the spring of the present year.

The *modus operandi* of the operation is so simple that, according to Mr. Lister, a first year student ought to be able to perform it as well as the experienced surgeon. The fractured bone is laid bare by a two-inch long incision in the median line. A hole is now bored with a bradawl in the centre of the margin of each

fragment of bone. This hole should not extend through the cartilage on the under side of the patella, but should run at an angle so as to come out on the fractured surface just above the cartilage. If it is a case of ununited fracture of several weeks' or months' standing, the edges of the fracture must be pared to remove all ligamentous tissue. The joint is then thoroughly cleansed of blood clots and fluid, and a drainage tube inserted. To make room for the tube, a perforation from the wound is made with the dressing forceps before cleaning the joint, — through the tissues to the exterior (side) of the knee, — the skin over the point of the forceps being cut through from the outside. The blades of the forceps are then opened to dilate the canal, and the drainage tube inserted in the space thus formed. Silver wire is now run through the holes in the fractured patella, and the fragments drawn into close apposition. A complete twist is given to the wire to hold it in place, and the ends allowed to project through the external wound, which is "put up" in antiseptic dressings, and the leg placed in a long splint. In every case, as stated above, bony union, with complete restoration of the power of the leg, was the result. In the last two or three cases, instead of leaving the ends of the wire sticking through the wound, the removal of which required a second operation of cutting through the recently formed cicatrix, etc., the wire after "two half twists," to use Mr. Lister's own words, was cut off short, and the ends hammered down onto the patella. This method has several advantages. It holds the fragments more firmly together, and admits of a much earlier use of the leg than could otherwise be allowed, and it obviates a second operation.

In one case, after the lapse of many months, the wire could not be detected; while in another it was just discernible to the touch, the skin moving freely over it. It is thus proved that the presence of the wire causes no further inconvenience. In the case of a man over sixty years of age, who had fallen from an omnibus and received a comminuted fracture of the patella, two pieces of bone from the lower fragment — one the size of a filbert, the other somewhat smaller — were found loose in the joint and removed. The very small remaining fragment, with the ligamentum patellæ, was then wired to the upper fragment, the result being a perfect union, with evidently new osseous growth, as the patella now appears quite normal. This was done in the early part of the present year, and the man has not yet wholly recovered complete use of the leg, although he walks without a limp, and says that the leg grows stronger every day. In another case the patient is a stamper, and works the weight (sixty pounds) with the injured leg, suffering no inconvenience.

It was interesting to notice the temperature charts which were shown. In no case was there febrile reaction; in one or two the temperature going up slightly after the operation, but immediately sinking and remaining normal. Mr. Lister believes that the operation should be done in recent fractures, and not put off until all other means have failed, — as in cases of long standing the bone becomes thinned by absorption, and there is less chance for a firm bony union from the operation. Recent fractures should not be treated at once, but should remain quiet until the inflammation has subsided. In one case this occurred as early as the third day; in another on the seventh. Mr. Lister considers this operation not only justifiable,

but, under certain conditions, obligatory on the part of the surgeon. These conditions are strict antiseptia. If the surgeon can with a clear conscience say that no septic material can enter the wound, it is his duty to operate. Mr. Lister's remarks on antiseptic treatment being cheered by the members, he thanked them, with evident pleasure, saying that such remarks a few years ago would have been received very differently. The hour being late, after a vote of thanks to the reader, the meeting was adjourned,—the discussion of the paper being postponed until the following Monday, when Mr. Lister is expected to continue his remarks on Antiseptic Surgery. W. P. MANTON.

Miscellany.

OBITUARY. ROBERT DWYER JOYCE, M. D.

INTELLIGENCE has been received of the death from phthisis of Dr. Joyce, which occurred at the residence of his brother in Dublin, October 23d, whither he went but a few months ago from this city. Dr. Joyce was born in Limerick County, Ireland, and received his rudimentary education at the ordinary country English and classical school near his father's place. He was subsequently sent to Dublin to complete his education, and afterward studied medicine at the

Queen's University, where he received his degree, and was then appointed Professor of English Literature in the Preparatory College of the Catholic University, Dublin. He practiced his profession for several years in Dublin with success, and in the intervals of his medical work contributed freely in prose and verse to many Irish periodicals. His allegiance to the cause of his native land was always very strong, and his writings breathe an intensely patriotic spirit. A volume of Ballads, Romances, and Songs earned for him from an English critic the title of the "Scott of Ireland." He gave hearty assistance to the Fenian movement, and was one of the most earnest writers upon the staff of its official organ.

In 1866 Dr. Joyce sailed for this country, and took up residence in this city, where he has since practiced his profession with success. His muse was employed for several years, during the intervals in his professional life, with ballads, songs, and sketches brimful of patriotism, which appeared in the *Pilot* and other Irish-American journals. In 1872 an edition of his poems was published which was well received by the critics. Dr. Joyce's crowning work, however, was *Dierdré*, an epic which appeared anonymously as one of the "No Name" series, and which was the cause of much speculation regarding its authorship. This and *Blanid*, which appeared later, earned their writer an enviable reputation as a poet.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 3, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	543	166	20.42	17.85	4.96	3.31	6.07
Philadelphia.....	846,984	340	107	23.70	13.50	.90	4.50	12.90
Brooklyn.....	566,689	—	—	—	—	—	—	—
Chicago.....	503,304	215	87	24.64	9.77	3.26	4.65	9.30
Boston.....	362,535	178	62	25.76	14.56	4.48	3.36	11.76
St. Louis.....	350,522	162	66	24.18	13.64	8.68	2.48	9.30
Baltimore.....	332,190	158	61	35.91	18.27	4.41	3.15	18.27
Cincinnati.....	255,708	86	29	10.44	16.24	—	3.48	—
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	73	21	10.96	17.81	2.74	2.74	—
Pittsburg.....(1883)	175,000	48	15	22.88	10.40	4.16	6.24	10.40
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	32	22	12.52	3.13	—	—	6.26
Providence.....(1883)	116,755	18	—	22.22	44.44	—	11.11	11.11
New Haven.....(1883)	73,000	12	1	25.00	33.33	—	16.66	8.33
Charleston.....	49,999	—	—	—	—	—	—	—
Nashville.....	43,461	14	6	28.56	28.56	7.14	—	21.42
Lowell.....	59,483	25	3	12.00	20.00	—	—	4.00
Worcester.....	58,295	18	11	27.77	16.66	11.11	5.55	11.11
Cambridge.....	52,740	30	9	16.66	16.66	3.33	—	6.66
Fall River.....	49,006	18	6	16.66	16.66	—	—	5.55
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	16	4	6.25	12.50	—	—	—
Springfield.....	33,340	10	2	20.00	20.00	—	10.00	10.00
Salem.....	27,598	7	2	—	—	—	—	—
New Bedford.....	26,875	8	0	—	—	—	—	—
Somerville.....	24,985	8	2	12.50	12.50	—	12.50	—
Holyoke.....	21,851	6	1	16.66	33.33	—	16.66	—
Chelsea.....	21,785	6	2	16.66	16.66	—	—	16.66
Taunton.....	21,213	9	2	—	22.22	—	—	—
Gloucester.....	19,329	12	2	—	16.66	—	—	—
Haverhill.....	18,475	4	2	25.00	—	—	—	25.00
Newton.....	16,995	6	1	16.66	16.66	—	—	16.66
Brockton.....	13,608	5	3	—	—	—	—	—
Newburyport.....	13,537	3	1	—	—	—	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	—	—	—	—	—	—	—
Thirteen Massachusetts towns.....	105,904	22	5	—	12.50	—	—	—

Deaths reported 2062 (no reports from Brooklyn, New Orleans, and Charleston): under five years of age, 701: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 450, consumption 319, lung diseases 197, diphtheria and croup 184, typhoid fever 75, diarrhoeal diseases 74, scarlet fever 43, malarial fevers 30, whooping-cough 14, cerebro-spinal meningitis nine, measles six, puerperal fever six, erysipelas five, small-pox four. From *scarlet fever*, Philadelphia 12, Chicago 10, New York eight, Boston four, Baltimore, Milwaukee, and Lowell two each, Cincinnati, District of Columbia, and Pittsburg one each. From *malarial fevers*, New York 12, Baltimore 10, St. Louis five, Chicago two, Philadelphia one. From *whooping-cough*, New York five, Boston three, Baltimore and District of Columbia two each, St. Louis and Cambridge one each. From *cerebro-spinal meningitis*, Cincinnati four, New York three, Chicago and Fall River one each. From *measles*, New York four, Baltimore and District of Columbia one each. From *puerperal fever*, Chicago three, Boston, Baltimore, Cincinnati, and Fall River one each. From *erysipelas*, Boston three, New York and Philadelphia one each. From *small-pox*, Philadelphia four.

In the 29 cities and towns of Massachusetts, with an estimated population of 1,035,778 (estimated population of the State 1,922,530), the total death-rate for the week was 19.08 against 18.69 and 19.34 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending October 20th, the death-rate was 19.6. Deaths reported 3240: acute dis-

eases of the respiratory organs (London) 252, scarlet fever 126, diarrhoea 122, fever 58, measles 54, whooping-cough 40, diphtheria 37, small-pox (Birmingham four, Sunderland one) five. The death-rates ranged from 11.1 in Norwich to 29.3 at Newcastle-on-Tyne; Bristol 15; Sheffield 17.8; Sunderland 18.1; London 18.6; Bradford 18.9; Birmingham 26; Leeds 26.8. In Edinburgh 16.4; Glasgow 22.1; Dublin 23.3.

For the week ending October 13th, in 168 German cities and towns, with an estimated population of 8,557,837, the death rate was 23. Deaths reported 3786; under five years of age, 1865; consumption 475, diphtheria and croup 289, lung diseases 278, diarrhoeal diseases 223, scarlet fever 141, measles and röteln 57, whooping-cough 54, typhoid fever 49, puerperal fever 27, small-pox (Erlangen, one) one. The death-rates ranged from 11.5 in Mainz to 34.6 in Königsberg; Breslau 25.1; Munich 29.9; Dresden 24; Berlin 24.7; Leipzig 17.8; Hamburg 20.8; Cologne 21.3; Frankfurt a. M. 17.4; Metz 23.1.

For the week ending October 20th, in the Swiss towns, there were 22 deaths from lung diseases, consumption 17, diarrhoeal diseases 13, diphtheria and croup two, whooping-cough two, puerperal fever two, erysipelas one, typhoid fever one. The death-rates were, at Geneva 11.3; Zurich 20; Basle 11.9; Berne 22.6.

The meteorological record for the week ending November 3d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
		Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Oct.—Nov., 1883.																				
Sun., 28	30.173	45	52	43	87	86	93	89	NW	E	SE	6	4	5	C	O	O	—	—	
Mon., 29	29.701	55	63	43	100	100	100	100	SE	SE	S	12	21	9	R	R	R	—	—	
Tues., 30	29.523	56	64	50	64	39	48	50	W	W	SW	32	32	14	C	C	C	—	—	
Wed., 31	29.811	48	60	43	63	59	68	63	W	NW	W	9	12	10	F	O	O	—	—	
Thurs., 1	29.770	43	51	37	70	56	78	68	W	W	W	8	10	10	C	C	C	—	—	
Fri., 2	29.953	39	45	35	82	68	69	73	W	NE	NW	8	6	10	F	O	F	—	—	
Sat., 3	30.168	39	48	32	78	53	72	68	W	W	SW	7	8	7	C	C	C	—	—	
Mean, the Week.	29.871	46	64	32				73										14.45	1.13	

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 2, 1883, TO NOVEMBER 9, 1883.

BACHE, DALLAS, major and surgeon. Paragraph 1, S. O. 238, A. G. O., October 18, 1883, assigning him to duty at Willet's Point, New York, revoked. Paragraph 2, S. O. 252, A. G. O., November 3, 1883.

STERNBERG, GEORGE M., major and surgeon. Leave of absence granted October 4, 1883, extended one month. Paragraph 4, S. O. 255, A. G. O., November 7, 1883.

VICKERY, R. S., major and surgeon. Assigned to duty at Fort Townsend, W. T. Paragraph 3, S. O. 149, Department of the Columbia, October 29, 1883.

WOLVERTON, WILLIAM D., major and surgeon. Granted leave of absence for one month. Paragraph 6, S. O. 201, Department of the East, October 24, 1883.

MERRILL, J. C., captain and assistant surgeon. Granted leave of absence for one month. Paragraph 7, S. O. 201, Department of the East, October 24, 1883.

PATZKI, J. H., captain and assistant surgeon. Granted leave of absence for three months, on surgeon's certificate of disability. Paragraph 6, S. O. 254, A. G. O., November 6, 1883.

OWEN, W. O., first lieutenant and assistant surgeon. Relieved from duty at Vancouver Barracks, W. T., and assigned to duty at Fort Stevens, Oregon. Paragraph 2, S. O. 148, Department of the Columbia, October 26, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING NOVEMBER 3, 1883.

THE orders of Medical Inspector A. C. GORGAS to the Naval Hospital, Mare Island, Cal., revoked, and to remain at Naval Hospital, Chelsea, Mass.

ROBINSON, SOMERSET, medical inspector, to the Naval Hospital, Mare Island, Cal.

DEARBORNE, F. M., surgeon, to appear before the Retiring Board, November 5th.

GIHON, A. L., medical director, and A. HUDSON, medical inspector, to represent the Navy at the meeting of the American Public Health Association at Detroit, Mich., November 13th.

SUFFOLK DISTRICT MEDICAL SOCIETY. *Section for Obstetrics and Gynecology.*—There will be a meeting of the Section at 19 Boylston Place, on Wednesday evening, November 21st, at 8 o'clock. Dr. Swift will report a case of Face Presentation. J. B. SWIFT, Secretary.

DEATHS.—Died at Dublin, Ireland, October 23, 1883, Robert Dwyer Joyce, M. D., M. M. S. S., late of Boston.

At Milford, Mass., November 7, 1883, Joseph Allen Fay, M. D., M. M. S. S., aged thirty-nine years.

Lectures.

ON THE TREATMENT OF DIABETES.

A CLINICAL LECTURE BY PROFESSOR DUJARDIN-BEAUMETZ,

Member of the Academy of Medicine, Physician to the Hôpital St. Antoine, etc., Paris, France.

GENTLEMEN, — The dietetic treatment of diabetes deserves the first place. Ever since John Rollo at the end of the last century first called attention to the influence of foods in the production of glycosuria, all authorities have felt the obligation to regulate rigorously the diet of diabetic patients. At their head is Bouchardat; after him I will mention especially Seegen, a German writer, and Cantani, an Italian, and what I have now to offer respecting the hygienic régime of this affection will be based on a careful study of the contributions of these three men.²

The hygienic treatment is founded on the endeavor, as far as possible, to exclude from the food all substances capable of forming glucose. This glucose may be derived from sugar in the ingesta, or from starch which has undergone conversion in the alimentary canal. These glycogenous principles, then, should be suppressed. All this, however, though simple in theory, is difficult in practice.

I told you in a former lecture, when on the subject of digestion, that an adult man loses by day twenty grammes of nitrogen and 310 grammes of carbon, and that in order to avoid emaciation he must obtain in his food this quantity of nitrogen and of carbon; it is well always to have these figures before you when you wish to lay down dietetic rules for your diabetic patients. The 310 grammes of carbon are furnished by sweets, feculents, and fats, and the suppression of the first two of these alimentary substances must considerably modify the conditions of alimentation. For, in order to suffice for this combustion of 310 grammes of carbon, if a man eats nothing but meat, he must consume two kilogrammes, so that a diabetic patient confined to a diet exclusively of animal food must be made to eat about four pounds a day! This enormous amount of meat is not without its inconveniences; by the quantity of nitrogenous material not utilized it augments waste-production, and provokes lithæmia; it moreover fatigues unduly the functions of certain portions of the digestive tube.³

Therefore Cantani, while suppressing entirely sugar and starch, has replaced these principles by fat, establishing thus what he calls *adipo-albuminous* diet; but as sometimes these oleaginous substances, which ought to be absorbed in great quantity, are of difficult digestion for certain stomachs, he first submits them artificially to the action of the pancreas, and administers to his patients *pancreatized fats*.

The régime of Cantani is difficult to follow in all its rigor; there are so few who can for a series of months subsist on meat and fat alone, for Cantani aims to have

this adipo-albuminous diet continued till the complete disappearance of sugar from the urine.⁴

Hence the dietetic régime of Bouchardat is more generally adopted; the principal characteristics of this alimentary system consist in the substitution of gluten for starch, and in the employ of gluten-bread.⁵

of Fat in Diabetes, etc., Deut. Arch. f. klin. Medicin, Bd. xxv., Hft. 4 and 5, p. 470, 1880.)

⁴ This is the alimentary régime of Cantani: —

Broths. Made with any sort of meat.

Beef. Muscle, brains, tongue, etc.

Veal. The muscle, all the internal organs, brain, sweet-bread, lungs, kidneys, but not the liver.

Mutton. The same as above.

Fowl and game of all kinds. Fish, frogs, and crustaceans.

Salt or canned meats or fish, but in moderation.

All the above may be either boiled, roasted, broiled, or fried in fat, and salted to the taste. They may be seasoned, but no sugar or starch must enter into the composition of the seasoning ingredients; also no wine, vinegar, butter, or lime juice. Olive oil and animal fats may be used freely, and dilute acetic acid may be substituted for vinegar, and citric acid for lime juice.

The quantity of food should be about 600 grammes a day, of cooked meat, and more if the scales show that the patient continues to emaciate.

In cases where denutrition is very pronounced, in very lean patients, sixty to two hundred grammes of *pancreatized fat* are given daily; this is prepared as follows: Cut into small pieces the fresh pancreas of a beef creature or sheep, intimately blend with it a small quantity of fat, and leave it for three hours or so submitted to this artificial digestion, then cook slightly.

Drinks. Water, pure, or artificial seltzer water, to which from ten to thirty grammes daily of rectified spirits may be added, and some aromatic waters (fennel, canella, balm, mint, orange) if desired.

If, after a month's trial, this régime does not cause the glycosuria to disappear, it will be best to make the patient fast twenty-four hours, taking nothing but water and some rich broth. Then the above regimen is resumed, but in half the quantity; little by little it is increased till the normal quantity is attained. But if the glycosuria reappears, another day of fasting, then the half diet again; which is not to be increased, unless the scales show that the patient is losing flesh.

In very recent cases, or cases of little gravity, eggs may be permitted, the liver of animals, cod-liver oil (two to four ounces a day), and shell fishes, such as oysters, snails, and clams. A little old red wine (Bordeaux wine is the best), a little tea or coffee without sugar.

Exercise in the open air, gymnastics, muscular labor; this régime should be rigorously persisted in for two months at least in light and recent cases; for three, six, and even nine months in the severer cases.

The return to saccharine and amylaceous articles of diet should be gradual, in accordance with the indications given below.

The following aliments may be permitted to a diabetic patient who for two months at least has had no sugar in his urine: —

Gradual return to a mixed diet. Spinach, chicory, endives, water-cresses, lettuce, dandelion, corn salad, olives, etc.

A little later. Chards, white beets, celery, artichokes, leeks, truffles, mushrooms.

A month after. Sweet almonds, nuts, pistachios, a little red wine. Still later. Gooseberries, peaches, apples, and other fresh ripe fruits, fresh cheese, butter, etc. Little by little vegetables abounding in starch, such as potatoes, are allowed.

During the entire duration of this return to a mixed diet the quantity of these permitted aliments to be very moderate, and, on the least reappearance of glycosuria, the meat régime must be resumed in all its rigor. As for cane sugar, it must be absolutely prohibited at all times. (Cantani, Du Diabète et son Traitement, traduction Charvet, 1880.)

⁵ The following, epitomized, are the general precepts of Bouchardat to diabetic patients: —

Eat moderately and slowly, chewing your food thoroughly.

As long as the quantity of urine of twenty-four hours is above a litre and a half (fifty ounces), drink as little as possible.

A minimum of liquid food, such as broth, soup, *consommé*.

Sip your liquids, rather than *drink*; small quantities always to be the rule. The sense of thirst can often be assuaged by rinsing the mouth with ice water, or by chewing a little roasted coffee or chocolate nuts.

Two meals a day; one at ten A. M., the other at six P. M. Instead of taking a nap after meals, take a short walk in the open air.

Do not go to bed till at least four hours after the last meal.

Abstain from tobacco as far as possible. Abstain from feculents and sugar in general. In particular, avoid all sweet food, bread of all cereals, pastries, rice, maize, and other feculent grains, potatoes, arrow-root, sago, tapioca, etc., all such farinaceous preparations as macaroni, vermicelli, cracked wheat, beans, peas, lentils, chest-nuts, and other nuts, turnips, radishes, carrots, beets, and other saccharine or feculent roots, all fruits, and especially the sweet fruits, such as plums, prunes, apricots, raisins (either fresh or dried),

¹ Continued from page 461.

² Rollo, on Diabetes Mellitus, London, 1790. Seegen, on the Diet Cure of Diabetes (Wien. med. Woch., 1873). Bouchardat, du Diabète-Sucre, Paris, 1875. Cantani, on the Diet Treatment of Diabetes, 1876.

³ Bloch has studied the action of régime on diabetic patients. He has shown that animal food is capable of diminishing the proportion of sugar in the urine without causing it to disappear; fasting has the same effect; and, moreover, the absorption of fats is very active in diabetic patients. So, according to him, a flesh diet, while causing sugar to disappear, hastens denutrition. (Bloch, Absorption

This question of bread is of great importance. Habituated from their infancy to this sort of aliment, bread is to some persons quite indispensable, so that it is hardly possible for them to make a meal without it. This with our diabetic patients is a feeling which ought to be overcome. Insufficient alimentation is with these patients one of the gravest evils. You may by severe diet-restrictions cause sugar to disappear from the urine, but it is at the expense of the well-being of the entire organism. So your efforts ought to be directed toward instituting a regimen which, while excluding starch and saccharine elements, may satisfy in a certain measure the taste and appetite of your patients.

Gluten bread and gluten cakes have been given to diabetic persons. Unhappily the mode of preparation of this kind of bread is not always what it should be, and when these culinary products have been analyzed, as they have been recently by Boussingault and Mayet, it is seen that they contain from ten to forty per cent. of starch. Therefore there has been a disposition to substitute for bread of gluten badly prepared, bran bread, as recommended by Camplin, or bread or biscuits of sweet almonds, as Kronser and Pavy have advised, or bread made of parched flour after Dannecy's formula, or the bread which Dahmen counsels.¹

You would do well, gentlemen, to use all these products, as well as the crust of ordinary bread and stale bread, for it is not so much the amount of starch and sugar contained in bread that is to be taken into account as the quantity which the patient eats. The dry gluten bread recommended by Bouchardat and the almond cakes and the bran cakes being generally hard and firm, the patient, whose gums are almost always affected with that diabetic gingivitis which loosens the teeth, is able to eat but a small quantity, and this is the reason why I prefer bread crust or hard, stale bread, for the patient can eat but a little of it. Add, moreover, that gluten bread is much less agreeable to the palate than ordinary bread, and that this circum-

stances, bananas, pears, apples, and melons. All jellies and preserves, all sweetened aliments or drinks, honey, milk, cider, beer, frothy or sweet wines, effervescent waters, lemonade, and other acidulous drinks, etc.

Wheaten flour, and flour from all other cereals, should be excluded from sauces, and gluten flour used instead; also the yolks of eggs, butter, and cream.

It was in 1841 that Bouchardat first called attention to gluten bread. To obtain gluten the flour is first washed for some time (twenty minutes to several hours, according to the purity of the flour) in a metallic sieve, No. 120. A paste is first made, and it is this paste which is submitted to constant irrigation. The fresh gluten thus obtained equals about one fourth the weight of the meal employed. The gluten should be used fresh and made into bread or cakes for glycosuric patients.

Boussingault and Mayet on analyzing these gluten cakes and this flour have shown that they still contain a considerable proportion of starch; from sixteen to forty-four per cent.

¹ Bran bread has been highly extolled by Camplin in the treatment of diabetes. (Camplin, on Diabetes and its Treatment. London, 1864.) This is his recipe for bran cakes: Take three ounces of wheat bran, three fresh eggs, two ounces of butter, one pint of milk, stir well together, and flavor with nutmeg or ginger. Place this dough in hot cast-iron baking pans, well buttered, and put in the oven for half an hour. Eat these biscuits instead of ordinary bread.

Pavy's bread of sweet almonds is made by first treating the almonds, reduced to fine powder, with boiling water slightly acidulated with tartaric acid, which deprives them of six per cent. of sugar. Of the paste thus obtained biscuits are made.

Dahmen's bread is made as follows: Soak wheaten groats half an hour in cold water; knead the dough thus formed in a stream of cold water, desiccate the glutinous residue, and triturate in a mortar. Take 165 grammes of this powder, mix thoroughly with one third quart of sour milk, add 125 grammes of melted butter, ten eggs, a little salt, and some carbonate of ammonia. When this mixture has acquired a pasty consistency place in French roll pans, well buttered, and consign to a hot oven till well cooked. (Berlin. klin. Woch., September, 1880.)

stance contributes to minimize the quantity of this kind of food taken with meals.

Pastries ought absolutely to be prohibited. Do not forget, in referring to the interesting analyses of Boussingault and Mayet, that there is an alimentary preparation, *échaudé* or *simnel*, which has as much starch as ordinary bread (the first containing fifty-three and the second fifty-five per cent.), and this should be proscribed. Other kinds, as *brioche*, may be permitted as including no more starch than the gluten biscuits, or about forty per cent.

These same analyses enable us to establish a diabetic régime from the point of view of feculents; potatoes, turnips, and rice contain relatively a small proportion of sugar (seven to eight per cent.), while gluten bread has 27.70 per cent; hence the former are less objectionable in this respect than the latter. But I repeat, all depends on the quantity of these aliments taken by the patient. If the diabetic eats largely of potatoes, notwithstanding the small quantity of sugar in them, he will obtain the same amount of sugar as if he were to eat sparingly of gluten bread.²

As for soups, I would advise you to keep clear of those made with gluten grains, as well as all rich broths. Here Boussingault has given us interesting facts showing that there is a large percentage of feculent matter in these soups.

As for green vegetables, I think that they may safely form a part of the dietary of diabetic patients, and in this opinion I am supported by Bouchardat. Water-cresses may be freely indulged at meals, also dandelion greens, artichokes, spinach, celery, cooked salads, etc. I know that green vegetables include notable quantities of saccharine matters, but they contain also potash, which is good for diabetic patients.

As for fruits, you should be very chary in their employ. The analyses of Mayet are very conclusive in this regard. Nevertheless melons, raspberries, gooseberries, and even oranges may be permitted under certain restrictions.³

As for alcoholic beverages, there are certain which are permitted, and others which are forbidden. Champagne, malt beer, and ale are interdicted; the same may be said of the effervescent, non-intoxicating drinks, lemonade, ginger beer, etc. Bordeaux and Bourgogne wines may, however, be allowed, as well as coffee and tea without sugar.

But you must avoid the deleterious effects of alcohol on the economy. A great many diabetics, to satisfy their intense thirst, drink great quantities of wine and

² Amount of sugar in 100 grammes:—

Turnips	7.00.	Lentils cooked and drained	22.50.
Baked potatoes	8.30.	Rice cake	25.00.
Rice (cooked in water)	8.00.	Fresh gluten bread	27.70.
Peas (boiled)	12.00.	Lancry's gluten bread	31.15.
Pea soup	15.60.	Bread of the Vichy Com-	
Beans	16.00.	pany	31.00.
Carrots	16.60.	Ordinary bread	60.00.
Chestnuts	20.00.	Ordinary flour	71.00.
		Ordinary starch	83.00.

³ The analysis of Boussingault shows that cabbages, chicory, turnips, carrots, beets, potatoes, and spinach contain from two to four per cent. of potassa.

The analysis of Mayet shows that the following fruits contain the percentages of glucose herewith given:—

In 100 grammes.		In 100 grammes.	
Gooseberries	1.50 to 8.00.	Peaches	10.50.
Melons	7.50.	Figs	15.00.
Raspberries	1 to 8.00.	Prunes	16.00.
Oranges	10.00.	Dried prunes	42.00.
Cherries	10.25.	Dried figs	71.00.
Dried raisins	76.00.		

(Mayet, Note on Sweet Fruits from the Point of View of their Introduction into the Dietary of Diabetics, Union Med., 1873.)

other alcoholic preparations. Such excesses are very detrimental. Bouchardat would limit diabetic patients to one quart of wine a day.

This subject of drinks is a very important one, for it is a pressing indication to diminish the excessive thirst which plagues diabetic patients, and many of them will keep demanding of you what they shall drink. I am much in the habit of ordering Vichy water, or water holding in solution from five to ten grammes of Seidlitz salts, or even mild bitter infusions, as of cinchona, hops, quassia, camomile, but it is well to urge the patient not to yield to his thirst, but to combat it as far as possible.

Ap[ro]pos of these beverages I ought to mention the employment of glycerine¹ in the treatment of diabetes. This triatomic alcohol gives good results in this disease, if we may trust to the experience of Schultzen, Harnach, and Holtz. In fact in the case of those patients who cannot tolerate the entire suppression of sugar in their drinks glycerine may sufficiently replace it, but it is necessary to protest against the large doses which have been recommended, for we have demonstrated (Audigé and myself) that glycerine may become toxic.²

Therefore, to recapitulate, these are the rules on which you should found the alimentation of diabetic patients: total abstinence from sugar and from sweetened food; diminution as complete as possible of amylaceous substances; animal food and fresh herbs, care being taken to select such vegetables and such feculent articles as have the least quantity of saccharine matters; almost entire abstinence from bread, Bordeaux wine, bitter drinks; no distilled liquors nor sweetened beverages.

The diabetic invalid, habituated to good cheer, ordinarily a high liver, will ask of you not only general indications but also particular details respecting the manner of varying his daily bill of fare. You will be able to satisfy this demand by consulting the "menus" of Bouchardat, that I place in part before you,³ and which should guide you in the choice of your culinary preparations, but do not forget that the rules which I have just prescribed, and which have also been

adopted by Seegen, are not immutable, and that you will be compelled in many circumstances to make compromises in the rigorous application of this dietetic regimen, for if it is dangerous for a diabetic to eat feculent and saccharine substances, it is more so to see him reject all kinds of food with disgust. In fact I cannot do better than to remind you of what has taken place in our female wards, where we had lately occupying No. 1 a lady patient suffering from the grave form of diabetes, and whom we have sent to Vichy. This woman, much emaciated, was losing more than 400 grammes of sugar a day. We desired to submit her to an exclusive regimen of meat and herbs, but she could not make a meal without bread, and gluten bread, as well as other kinds of hard bread, were intolerable to her. Therefore this privation of bread had resulted in loss of appetite, and if under the influence of abstinence we indeed did see the sugar diminish, we observed at the same time a circumstance of great gravity, namely, enfeeblement of the forces. On this account we yielded to the desire of the patient, and allowed her a small quantity of bread with each meal. What we did you will often have to do, but take care always to test the results of your dietetic prescriptions by daily analyzing the urine, and in this analysis the saccharimetric process of Duhomme will render you great service in enabling you expeditiously to examine each day the effects of alimentation. The hygiene of the diabetic does not consist exclusively in attention to diet, it is necessary also by physical exercises, varied and multiple, to energize the combustion of hydro-carbonaceous matters. Here, moreover, it is Bouchardat who has furnished the best indications to follow in the forced exercise of diabetic patients, and you will find described with a great deal of humor the main features of these forced exercises in the spirited work of Jules Cyr. All that can augment the forces of the economy ought to be employed in these cases, and it would be well to vary these exercises according to the needs of the patients. Gymnastics, fencing, forced marches, work in the garden, manual exercise, carpentry, all have their place and their use. You may even add to these means inhalations of oxygen, baths of compressed air, inhalations of compressed air, in a word, all measures which may increase the organic combustions in rendering more active the respiratory functions. In fine Bouchardat has also insisted on the necessity of special attention to the functions of the skin. You know, in fact, that in grave cases of diabetes the skin becomes dry and rugose, hence warm baths followed by massage are useful in such cases, and may be taken two or three times a week. With this hygienic treatment you can in mild cases cause the glycosuria absolutely to disappear. In diabetes of medium intensity you will considerably lower the amount of sugar, but you will have to conjoin certain medicines, and it is these medicaments which I am now going to consider. I propose to pass rapidly over the pharmaceutical agents whose medicinal action in diabetes is not satisfactorily demonstrated, to dwell more particularly on three of them which possess marked curative virtues. I refer to the alkalies, arsenic, and bromide of potassium.

Certain antiseptic remedies have been much vaunted these late years, such as salicylic acid and carbolic acid. Ebstein and Muller, Ryba and Plumert, Fischer and Peters, have recommended this method of treatment. According to Fürbringer, these anti-fermentescible substances are much superior to the other pharmaceutical

¹ Schultzen, of Dorpat, has counseled the use of glycerine in diabetes, which he considers a powerful adjunct to the ordinary alimentary regimen. The same may be said of Garnier; both give twenty to twenty-five grammes (or somewhat less than an ounce) daily. Harnach recommends still larger doses, from 180 to 360 grammes a day (or from six to twelve ounces), and affirms that these quantities have no injurious effect, have no influence on the amount of sugar eliminated, and rather favor the amelioration of the patient. Holtz believes that glycerine has not merely a neutral effect as far as the glycosuria is concerned, but that it decidedly lessens sugar excretion. (Garnier, on Glycerine in the Treatment of Glycosuria, Comp. Rend. de l'Acad. des Sc., 10 Mai, 1875. Harnach, on the Treatment of Diabetes by Glycerine, Deutsch. Arch. f. klin. Med., vol. xv., p. 449. Holtz, Ueber Diabetes, Petersburger. Med. Woch., No. 3, 1880.)

² Dujardin-Beaumetz and Audigé, on the Properties of Glycerine. (Bull. gen. de Ther., t. xci., pp. 51 and 135.) Also, Experimental Researches on the Toxic Power of the Alcohols. Paris, 1879.

³ [The "menus" of Bouchardat are omitted, as being more applicable to the gourmands of France than of this country. In brief, soups with cabbages and leeks, without bread or flour, are permitted, also rich broths with gluten crackers. Meats of almost all kinds are allowed, with *hors d'œuvre*, as before given (*vide supra*); eggs, shell fish, salads, and *entremets* of gluten cakes, waffles of gluten flour or pure bran, jelly with rum, *kirsch*, or coffee without sugar, omelets with rum (not sweetened), and vanilla. He also specifies as allowable, among the *entremets*, artichokes, cabbage, with sauce, oil, gravy containing gluten flour, or Parmesan cheese. Chicory, lettuce, and other herbaceous vegetables; asparagus, spinach, mushrooms, etc. If tea and coffee (which should never be sweetened) have no influence favoring the glycosuria they may be indulged in. Alcoholic liquors should be used with great moderation. Of wines (a quart a day for a man, a pint for a woman), choose the old red wines or the old white wines (Madeira, Chablis, Pouilly, Sauterne, Rhine, etc.). TRANS.]

agents. The trials which I have made with these medicines on divers of my patients, both in hospital and private practice, have not given me such good results. I have not observed notable diminutions in the sugars, and I have seen, like Kamen, gastric troubles, and I believe that there is risk in administering large doses of these phenols to some diabetic patients by reason of the bad state of their kidneys. To these medicaments we must add permanganate of potash, proposed some time ago by Sampson, of London, and which Masoin, of Louvain, has recently brought into vogue. This permanganate of potash may have a good effect on diabetes of hepatic origin. Cantani has asserted the favorable action of lactic acid in the treatment of diabetes. He thinks that this acid favors the digestion of animal food and the organic combustions; it is even, according to him, the unique medicine to give to the diabetic. As I have never advised the exclusive diet of the Italian physician, I have not used his pharmaceutical treatment, I cannot, then, give you any information on the employment of lactic acid. Ogles pretends that this medicament diminishes the quantity of sugar, but at the same time lessens the weight of the patient. Struck with the action of certain narcotics, such as opium, belladonna, valerian, on the quantity of urine voided each day, it has occurred to physicians to reduce the polyuria of the diabetic by the use of opium, and it is on this principle that Willis, Rollo, and Tomasini have advised this medication. Diabetic patients, in fact, bear opiates well even in very large doses, and you may note in some of them a diminution of urine and in the quantity of sugar, but this result is obtained at the sacrifice of the digestive functions and of the appetite. This is an evil which attends the use of a great many pharmaceutical preparations, and is to be avoided. To lessen the sugar in the urine by diminishing the appetite and troubling the digestive functions is to render a very poor service to the diabetic. Valerian is more applicable to *diabetes insipidus* or polyuria than to saccharine diabetes. Trousseau has shown that under the influence of this medicament there is a diminution in the quantity of urine, on condition always of giving large doses, and he was in the habit of administering as much as an ounce a day of the extract. Ergot of rye acts also against polyuria rather than against glycosuria, and Huchard has recently shown the good effects which may be obtained from the spurred rye in *diabetes insipidus*. Iodine and the iodides have also been employed in the treatment of glycosuria. Ricord, Berenger-Feraud, Rayer, and Seegen principally have exhibited the tincture of iodine in the dose of from twenty to thirty drops a day, and have seen the sugar disappear from the urine, but it is an irritant medication and fatiguing to the stomach. I pass rapidly over the chalybeates, phosphorus, cantharides, pilocarpine, the juice of *cana-agria*, to arrive, at last, to the consideration of the alkalies, arsenic, and bromide of potassium.

The alkalies are the most precious pharmaceutical agents in the treatment of diabetes, although we have no very clear explanation of their therapeutic action. Miahle having pretended that glycæmia depends on want of alkalinity of the blood was one of the first to recognize the utility of alkaline medication, but, as Becquerel and Lapezzuoli have shown, this is a mistake, for the blood of diabetic patients presents no modification in its alkaline reaction.

It is probable that in diabetes the alkalies have a complex action; they regulate the digestive functions, and energize the functions of nutrition (as shown by the researches of Hyades and Martin Damourette), in fine, it is possible that they have, as Coignard thinks, a direct action on the glycogenic functions of the liver.

Many alkaline preparations have been prescribed; some, as Rollo, Willis, Fothergill, and Wat, have counseled lime-water; others, as Dur, Neumann, Barlow, Adamkiewicz, prefer the ammoniacal salts; Bouchardat and Pavy have especially advised the carbonate of ammonia.

Potassa has also been exhibited, and Bouchardat, who cannot be too much cited when diabetes is under consideration, has proposed to substitute for the common salt in the ordinary dietary of the diabetic the potassic tartrate of soda, known as Rochelle salt. This preparation he considers superior to the citrates of soda and potassa, which he was formerly in the habit of prescribing. He even advises the use of the Seidlitz salt in the preparation of diabetic bread. But the alkaline salt the most employed in the treatment of diabetes is the bicarbonate of soda, and here we must give the preference to the natural alkaline waters over the artificial waters, which fatigue the stomach, and cannot be borne for any great length of time. You will then order your diabetic patients to drink with their meals waters with but a moderate degree of alkalinity, say two or three grammes per litre, and there is nothing better than the Vals or Vichy waters.

Arsenic has these late years been much extolled in the treatment of glycosuria. It has been supposed that arsenic, in modifying the constitution of the liver, modifies also the glycogenic functions, and the recent experiments of my colleague, Quinquaud, have shown that this medicament always diminishes in animals glycæmia, glycosuria, and glycogenesis. This is a fact of great importance, and shows us the advantages which may be derived from arsenical medication in diabetes. Fowler's solution is the best form to choose; of this you need not fear to give large doses, even twelve to fifteen and twenty drops, according to the tolerance of the digestive tube.

Arsenic is not the only metal or metalloid used in diabetes, iodine has been prescribed, and even copper and mercury, the first by Franck and Berndt, the second by Brera and Scott. Burq has even thought that his process of metallothrapy and metalloscopy has a field of usefulness in these cases.

The attention of the medical world has of late been called to the curative action of bromide of potassium in diabetes by a very interesting communication by Dr. Félizet to the Académie de Médecine. Félizet has shown that in certain cases in following the dietetic régime of Bouchardat and the alkaline medication by bromide of potassium, one may free the urine entirely of the sugar which thus far has persisted in making its presence manifest.

This is a kind of treatment which was counseled by Beghie in 1866, but which being tried anew by other physicians had not given very favorable results. In the trials which I made in my service, and in the report which I presented to the Academy of Medicine on this subject, while recognizing the fact that bromide of potassium in the dose of one to two grammes a day may cause glycosuria to disappear, just as Félizet had announced, I showed that the use of this medicine was not without inconveniences. It depresses considerably

the forces, and this depression is sometimes so great that the patient is not able to leave his bed. I think, then, that it is necessary to be very prudent in the administration of medicaments of this character, and reserve them for cases of diabetes of nervous origin, and for patients sufficiently vigorous to support such treatment.

The thermal treatment of diabetes is of preponderating importance, and the results which may be derived from it are based on the physiological effects of alkalies and arsenical salts in glycosuria. It is, then, to the alkaline and arsenical spas that you should send your patients, and you may utilize the alkaline waters of Vichy and of Carlsbad, or those of Royat and Bourboule if you desire especially for your patients the constitutional effects of arsenic.

I shall have finished this long enumeration of the means of treatment of diabetes when I shall have said a few words about the local treatment of diabetes by electricity, hydrotherapy, setons, and cauteries.

It was Semmola who, in 1861, first recommended the employment of constant currents upon the pneumogastric in the treatment of diabetes. Leidel and Prof. Leon Le Fort have obtained good results from galvanism.

Fleury has counseled hydrotherapy. I believe that it is necessary to be very careful in the use of this hygienic remedy, and not to employ it except when your diabetic patients are robust, and capable of vigorous reaction.

The same prudence should be exercised in the use of setons and cauteries. Butura and more recently Boutigny have noted cases of diabetes where complete disappearance of sugar from the urine followed the application of cauteries and setons in the region of the neck. But you should remember the danger of wounds (which do not readily heal) in the case of diabetic patients, and be extremely cautious about attempting treatment of this kind.

Such are the therapeutic rules applicable to the treatment of diabetes. Here the dietetic regimen is far the most important, all other modes of treatment being accessory means whose real value is often more or less debatable. But whatever this value may be, the combination of these means none the less constitutes an efficacious system of therapeutics, and without daring to affirm, as some have done, that diabetes is to-day a disease easily and certainly curable, I believe that in a very great number of cases we can have a useful and a real influence on the disease, and this is why I have devoted so much time to the consideration of these details.¹

Original Articles.

A NEGLECTED FIELD OF MEDICAL SUPERVISION.²

BY C. B. SHUTE, M. D., MALDEN.

THOUGH with some hesitation as to whether the time of presenting the subject is an opportune one, yet on account of its importance I have ventured to call your attention to a field of medical supervision, hitherto for the most part neglected, but in which the medical profession may confidently hope to exert a most salutary

¹ [*Dukomme's Rapid Analysis of Diabetic Urine*. Codman & Shurtleff, of this city, inform us that they are prepared to furnish the graduated dropping tubes of Limousin referred to in the portion of this lecture given in last week's JOURNAL. See pp. 459, 460.]

² Read before the Middlesex South District Medical Society, October 10, 1883.

influence, and to effect results beneficial as well as brilliant. There is a class of sufferers who are numbered by thousands, in this as well as in other commonwealths, and who are constantly forced upon our notice in the daily rounds of our practice, and yet we, as physicians, although aware of their need, are doing almost absolutely nothing for their relief. I refer to the class of chronic inebriates.

It is true that we are occasionally called to treat complications arising from the abuse of alcohol. To this we can often trace many of our cases of Bright's disease, cirrhosis of liver, phthisis, many affections of the cerebrum, and nervous system in general. It is mostly in such forms of disease that these unfortunates close their mortal career, and we are called to them during the last days of their existence. But it is also true that during the long period of their downward course we have little to do with them as a class. Perhaps this arises in a great measure from the fact that they do not regard themselves as needing medical assistance, and therefore do not call for our services. Even if we were to offer any advice in such cases, it would generally be rejected, so that the fact remains, as before stated, that chronic inebriates are for the most part untreated.

To avoid misunderstanding, it is necessary to indicate more precisely what persons are intended to be included in this class. I have no reference to that large number of moderate drinkers who, while taking their daily potion of spirit, never suffer themselves to indulge in any excess, nor yet to that smaller group of periodical drinkers, persons who are perhaps totally abstinent from alcoholic liquors for a certain length of time, but now and then give themselves up voluntarily to a complete debauch, which may or may not terminate in an attack of delirium tremens, but is followed by another period of voluntary abstinence. By the expression "chronic inebriates" is meant that class of persons who have lost all self-control in their passion for drink, who have no ambition to work or engage in any employment, except perhaps so far as it may furnish them the means for the gratification of their appetite; in short, whose whole aim in life seems to be indulgence in some form of alcohol. These worse than drones, who infest every community, are more numerous than would at first appear. Look around you in your own town or village and you will be surprised at the number you may find. It is certainly not an over-estimation to rate this class as numbering five persons in every one thousand. This will give for this Commonwealth the large number of about nine thousand persons. If to this number we add the families who are made sufferers by the failure of these wretched persons to provide for their proper support, we have a grand total of about forty thousand people who are the victims of this great evil in this State alone.

It may be claimed at the outset that this is not a question for the medical profession, that it belongs to the philanthropist, to the preachers and their churches, to the temperance worker; in short, that it is a question of moral reform. I have no desire to trespass upon the sphere of work of the above-mentioned persons, nor indeed to discuss in the least the question of temperance. If the class of unfortunates now spoken of could be reached by any such moral agencies, I should feel that we might safely leave them to such influences. But what moral influence can avail with this class of people? What appeal from such a source

would affect the course of any of these confirmed drinkers, who, like the Rip Van Winkle of Jefferson, are always ready to exclaim that "this glass don't count?" The fact is, that in losing their self-control, that is, their power of shaping their own course by an effort of their own will, they have also lost all susceptibility for improvement from any moral influence. The work of these reformers may lie with the other two classes mentioned, but not with the class under consideration. The latter may be regarded as hopeless so far as moral reform is concerned.

Again, it may be objected that these persons, instead of being subjects for medical treatment, are victims of a vicious habit, and should therefore be considered as criminals, and be subjected to a suitable legal punishment. This brings me to the pith of the subject. Are they criminals, or are they subjects of disease? If they are criminals, then we, as physicians, have nothing to do with them. If the latter alternative is the case, then they fall under our jurisdiction.

There are few who will hesitate to acknowledge that mankind in all ages and in all conditions of life has an instinctive, inborn craving for some form of stimulation. This, like other propensities and passions which go to make up the human character, is in most persons entirely under the control of the will. Most men may will or not to indulge in alcoholic drinks as they please. Even most of those whom I have grouped in the second class, namely, those who give themselves up to occasional or periodical debauches, really yield to these excesses of their own accord, having the power all the while of restraining themselves, a power which they do not care to exercise. They wish to have a debauch, and they have it.

Unfortunately all persons are not so constituted that they can exercise entire freedom of their will in such matters. Subject to adverse hereditary influences, and reared under circumstances which only tend to strengthen and make more prominent certain inherent tendencies, they are powerless to resist their certain destiny. They are swept onward towards the maelstrom which is certain to engulf them. They are veritable monomaniacs in the attempt to secure the accomplishment of their desires. No ordinary motives of self-interest or regard for health or prosperity or care of friends have any effect upon them. They are bent on indulging their own appetites, regardless of its consequences upon themselves or friends. Surely this is a frenzy which borders closely upon, if it is not in reality, a form of insanity. We cannot regard these ill-fated ones as criminals, for they are not responsible for the circumstances under which they were born and reared, and which brought them to this pitiable condition. They have diseased brains, and we should care for them as we do for others who are bereft of reason. Dipsomania is as truly insanity as the homicidal or suicidal mania or kleptomania. Apply the tests of insanity to the cases under consideration, and they fulfill all the conditions. They have not been so considered in the past, and they have consequently been neglected. We cannot escape the conviction, if we would, that this class of unfortunates comes strictly within the jurisdiction of the medical profession.

What say the medical authorities upon this important point?

Professor Boehm speaks of the want of character, or want of individuality, of chronic inebriates. In such cases, he says, we do not know if the craving for

drink, the alcohol mania, be the original cause of the malady, or whether we must regard the craving as itself one of the symptoms, unless we have watched the development of the disease from its very beginning. Continual struggles with temptation and continual yieldings to it reduce the man, who was, perhaps, at first a well-meaning person, to a state of irreconcilable conflict and dissension with himself, with duty, and with all the world around him. His power of resistance grows gradually weaker and weaker, whilst at the same time, step by step, his intellectual and physical powers grow more and more feeble. In this category one often finds men of position and eminence—high-class men in every sense. And just in proportion to the original development of what we may call the higher ethics is the psychical conflict increased, and is the completeness of the moral ruin. Sots of the lower orders do not fall so low, because they have never climbed so high. Comparatively few are reclaimed in the long run. Very many, indeed, put an end to their own lives, but the great majority perish by intercurrent diseases, or are attacked by general paralysis.

Anstie mentions as one of the most influential causes of alcoholism a peculiar inherited constitution of the nervous system. He says that he has been greatly struck with the number of drinkers who have informed him that their relatives, either on the paternal or maternal side, have also been given to drink. And a still larger number are found, on inquiry, to come of families in which some nervous disorders (especially insanity, epilepsy, and neuralgia) have been markedly prevalent. His own experience has led him to a firm conviction that particular causes of nervous degeneration affecting individuals do very frequently lead to the transmission to the offspring of those persons of an enfeebled nervous organization which renders them peculiarly liable to the severer neuroses, and which also makes them facile victims of the temptation to seek oblivion for their mental and bodily pains in narcotic indulgence. He believes that things often work in a vicious circle to this end; and that the nervous enfeeblement produced in an ancestor by great excesses in drink is reproduced in his various descendants with the effect of begetting insanity in one, epilepsy in another, neuralgia in a third, alcoholic excesses in a fourth, and so on. Among the higher classes careful inquiry elicits facts of this kind with surprising frequency. So strong is the impression left on his mind by what he has observed in this direction, that he is inclined to believe that the great majority of the most inveterate and hopeless cases of alcoholic excess, among the higher classes, are produced by two factors, of which the least important is the circumstance of external momentary temptation in which the patient has been placed, while the more momentous and weighty cause lies in an inherited nervous weakness which renders all kinds of bodily and mental trouble specially hard to bear. It need hardly be remarked that, in view of this case, the fatal rapidity with which habits of intemperance exaggerate themselves is only what might be expected, seeing that the nutrition of the nervous centre would be still further impaired by each successive indulgence in poisonous doses of alcohol, and the power of moral resistance to feelings of depression and misery would be proportionately weakened.

Anstie speaks of oinomania as a variety of constitutional insanity rather than of alcoholic disease. The

sufferers are usually descended from families in which insanity (and often insanity of the same type) is hereditary. Patients of this class very commonly display their tendencies early in life; sometimes, indeed, on the very first occasion on which the opportunity for the free use of strong drink presents itself.

Brühl-Kramer says that alcoholism in the father is worse as regards offspring than alcoholism in the mother.

The hopelessness of the case lies in the taint of insanity which almost always is at the foundation of the complaint, and which makes it almost impossible that the patient can effect a thorough reformation of his habits. However virtuous his intentions may be, and however strongly he may be urged by every consideration of prudence, or affection for those whose interests may depend upon his conduct, it appears as if he were impelled by a really irresistible force to yield himself, at certain intervals, to the temptation of drink. When the outbreaks become, as they usually do in the end, greatly more numerous than at first, there is reason to apprehend the speedy supervention of confirmed insanity. In this condition of things "pledges" of reformation are of no avail. As Anstie says, "Pledges" have a tendency to lessen the force of such notions of personal responsibility as he may retain; he is apt to rest his confidence on the oath or formal resolution which he has taken, instead of teaching himself the virtue of self-restraint.

Morel says that not only is the vice of alcoholic abuse hereditarily transmissible, but it also frequently leads to insanity in the offspring of the drunkard. He gives a remarkable example of this. The great grandfather of the family was a dipsomaniac, and so complete was the transmission of the disease, that the race became totally extinct, under the well-marked phenomena of alcoholic poisoning and degeneracy. The effects entailed were: in the first generation, alcoholic excesses, immorality, depravity, brutish disposition; in the second generation, hereditary drunkenness, attack of mania, general paralysis; in the third generation, sobriety prevailed, but hypochondriasis, lypemania, persistent ideas of persecution, homicidal tendencies, were expressed; in the fourth generation, intelligence was but feeble; mania became developed at sixteen years of age, stupidity running on to idiocy, and to a condition involving extinction of the race.

The late Dr. S. G. Howe, in a report on idiocy made to the Legislature of Massachusetts, came to the conclusion that "directly or indirectly alcohol is productive of a great proportion of the idiocy which now burdens the Commonwealth of Massachusetts."

In an annual report of the hospital at Columbus, Ohio, Dr. Hills says of one of his patients that his father, in the first part of his married life, was strictly temperate, and had four children, all yet remaining healthy and sound. From reverses of fortune he became discouraged and intemperate for some years, having in this period four children, two of whom we had now received into the asylum, a third was idiotic, and the fourth epileptic. He then reformed in habits, had three more children, all now grown to maturity, and to this period remaining sound and healthy.

Another similar case follows: An intemperate parent had four children, two of whom became insane, one was an idiot, and the fourth died young in fits. Four children born previous to the period of intemperance and two after the parent's reformation are all sound and healthy.

Ray refers to that insatiable propensity to drink which impels the person to indulge in spite of the strongest possible inducements to refrain, as if the will were powerless and the moral sense somewhat blunted. It differs from the ordinary fondness for drink, in which, no doubt, it generally originates, in being beyond the control of any conceivable moral consideration, and connected, probably, with some pathological condition of the brain. It is manifested under two general forms. In one the person proceeds from one excess to another and a greater until a maniacal condition of the brain is produced, when he becomes unconscious of his acts, and often disposed to violence. In the other he retires to some secluded place, and there quietly and alone rapidly imbibes large quantities of liquor until the stomach refuses to receive any more. He then remains for a time in a stupid, listless state, which is succeeded by the natural condition, and this, after an interval more or less brief, by a repetition of the same scenes. In both cases the individual seems to have no more moral freedom than the true maniac has while committing his extravagances. He is entirely under the dominion of an organic impulse by which he is led automatically and sometimes unconsciously. In the early stages of the paroxysm he may appear to be aware of what he is about, and fancy that he is only indulging within reasonable limits. He feels quite secure, and every remonstrance is indignantly answered in a tone of injured innocence. Or he may admit to the fullest extent the enormity of his sin and his peril, while he deplores his utter inability to resist the appetite that rages within him.

Macnish, in his *Anatomy of Drunkenness*, relates the case of one who thus replied to the remonstrances of his friend: "Your remarks are just; they are, indeed, too true; but I can no longer resist temptation. If a bottle of brandy stood at one hand, and the pit of hell yawned at the other, and I were convinced that I would be pushed in as sure as I took one glass, I could not refrain. You are very kind. I ought to be very grateful for so many kind, good friends, but you may spare yourselves the trouble of trying to reform me; the thing is out of the question." And thus it is that advice, admonition, and reproach are all equally lost upon this class of persons, and the end is the same in nearly all—they lose all rational control over their conduct, abandon their employment, desert or abuse their families, and though they commit no act of violence they at least destroy the peace and threaten the safety of those around them.

Bucknill and Tuke define dipsomania as an uncontrollable and intermittent impulse to take alcoholic stimulants or any other agent which causes intoxication. They say that the prominent feature of the disease is its irresistibility; the thirst for drink is the tyrant which overbears all the higher emotions, and blindly leads the oinomaniac to a course against which his reason and his conscience alike rebel.

(To be continued.)

— Attar of rose, one minim to the drachm of iodoform, will, on the principle of the survival of the fittest, it is said, get the better of the odor of the latter drug, and the patient, instead of a social Pariah, may become a garden of delights unto himself and all his neighbors.

A CASE OF MALIGNANT DISEASE OF THE UTERUS.¹

BY W. E. BOARDMAN, M. D.

In August, 1878, Mrs. A. was referred to me by a physician of this city. She was a lady, fifty-two years of age, who had always enjoyed excellent health, of good physique, but inclined to corpulency, with no hereditary tendencies to disease so far as could be ascertained, the mother of four children, all living at the time, at whose birth nothing unusual to normal labors appears to have occurred, and until the commencement of the present illness she had not had her attention directed in any way to the pelvic organs except by the proper performance of ordinary functions. A lady of refinement by birth and education, and highly cultured, she was always of a cheerful disposition, methodical and abstemious in her manner of life, though possessed of abundant means. The menopause had been completed several years before, at the age of forty-five, without any noticeable disturbance of the system. Since that period she had continued in her usual good condition both mentally and physically. In the previous spring, in February or March, I think, five or six months before I first saw her, she was surprised at what appeared to be a return of menstruation, though the flow was more profuse than it used to be. There was no pain attending this, and it might have been forgotten had it not been followed by a slight leucorrhœal discharge, thin, watery, clear, and inodorous, becoming later of a dirty color, emitting a disagreeable smell, and increasing in quantity. It was this discharge which led her to consult a physician, a lady of large experience. Remaining under her professional care for a time, and without any relief in the way of correcting the discharge, she decided to consult me, by the advice of her family physician. (I afterwards learned that her husband had been given an unfavorable prognosis by this her first medical attendant.)

At the first visit I found the patient in excellent condition generally, in complexion, physique, nervous and muscular energy. The functions were well performed in all respects. Nothing troubled her except the leucorrhœa. There had been no recurrence of the hæmorrhage per vaginam. The discharge at this time was inodorous, clear, albuminoid in appearance, but sufficiently abundant to require the constant use of napkins. There was no pain; no tenderness under pressure over the lower abdominal region. The vagina presented nothing abnormal. The uterus was not enlarged, though atrophy had not ensued. The cervix was perfectly healthy in appearance; the os was quite patulous, though there was no eversion of the lips of the cervix. The position of the organ was normal; it was freely movable in any direction and without pain or undue sensitiveness. Its depth, as measured by the sound, was two and one half inches. The introduction of this instrument did not occasion bleeding. The patulous condition of both external and internal os enabled me to introduce readily Thomas's soft wire curette, with which I succeeded in removing only, perhaps, two or three particles which looked like granulation tissue, while otherwise the interior of the uterus appeared to be perfectly smooth and healthy. Knowing, then, that she had been under local treatment for some time, I concluded that she was either about cured

or that, perhaps, some application had been made within the uterus which had given rise to these granulations. At all events I stated at the time that so far as I could then ascertain she would probably soon be quite well again.

At a subsequent visit, one week later, the discharge was pronounced less in quantity, and nothing new in the case was detected. The following week she was seen again, and reported improvement. The curette was introduced again, and brought away, with some hæmorrhage, readily controlled with iodine, an increased amount of supposed granulation tissue, together with several small sago-like particles, which the patient stated resembled some she had previously observed on her napkin, and which she very aptly called "barnacles." Moreover, when pressed, some of these particles emitted a notably offensive smell. Dr. E. G. Cutler, of this city, kindly examined these, and sent me the following communication in regard to them:—

"September 18, 1878.

"I have examined all those pieces carefully, and do not find anything characteristic of either epithelioma, sarcoma, or carcinoma. There is a papillary increase of all the tissues, and it may be malignant. I had the examination of another such two years ago. I mean locally malignant. It has returned in spite of repeated destruction, and you want nothing more than this, provided you are sure you destroyed it before, to make it a growth to be afraid of. I should on the whole regard it unfavorably. There did not seem to be anything like cell infiltration in any of the specimens, which is characteristic of malignancy."

Acting upon this opinion I was necessarily obliged to modify somewhat my previous favorable prognosis. A week later the curette indicated a slightly roughened surface, as large as a common bean in its outline, on the upper and anterior portion in the right side of the cavity, and from this limited area alone these "barnacles" could be scraped. The remaining portions of the uterus and cervix appeared to be perfectly healthy.

One month later, October 25th, my notes of the case state that the diseased area had gradually diminished in extent, but the discharge continued without perceptible change in quantity or quality.

In the following month my notes convey the information that the fundus appeared to be free from disease, but that upon the interior of the body, just within the internal os, a similar roughened locality had made its appearance, involving an extent of surface equal to half the circumference of the cervix at that level. In the middle of the next month the same disease was detected again at the fundus, in the same locality as before, while it had not disappeared from within the internal os. From this time my attention was directed to these two diseased localities. The curette, both dull and sharp, liquid applications of various kinds, used alone and after the employment of the curette, appeared to have no effect in eradicating the disease, though its extent did not seem to increase so long as treatment was applied at tolerably frequent intervals. In the mean time the discharge continued to increase somewhat in amount, and became more, offensive so that frequent ablutions were required in order to avoid the detection of the odor by others.

In the summer of 1879 she went as usual to her sea-shore home, and for one month, from July 9th to August 9th, I did not visit her, partly in order to as-

¹ Read before the Boston Society for Medical Improvement, November 12, 1883.

certain if she would not do as well without any treatment. At my visit, after this interval, I found the area of disease, in both localities, was increased. She reported that, on two occasions, she had expelled, with slight pain, a cylindrical mass, as large as the little finger, and one to two inches in length, gray in color, quite dense in appearance, easily broken up, and emitting a most foul stench. Her strength, too, had begun to deteriorate, notwithstanding the constant use of various tonics, and her face exhibited a sallowness peculiar to grave disease. A considerable amount of diseased tissue was removed at this visit, by means of the curette, and fuming nitric acid was applied. Before the arrival of the time for the next visit agreed upon she had an ill turn with chill, temperature 104.5° F., rapid respiration, flushed face, vomiting, and delirium.

Subsequent to this attack her strength returned slowly and imperfectly. While she suffered none from local pain or tenderness, she did not feel that she could submit to any local examination, and I did not visit her again until her return from the sea-shore, on October 25th. Examination then showed the uterus to be larger than it was a year before, the sound measuring a depth of a little over three inches, and its bulk, too, was greater as determined by bimanual manipulation. The cervix was still free from disease, except that the area of the diseased portion, which formerly stopped abruptly at the internal os, now extended a few lines within the supra-vaginal portion. Within the fundus, at its upper anterior portion, on the right side, the disease had extended so as to include an area measuring one half an inch by one inch. The uterus was still freely movable and without pain. The curette brought away granulations, sago-like particles, and a *grayish, stinking mass*, similar in appearance to the cylinder-shaped masses which have been described. A portion of this material was examined by Dr. Cutler, whose report was as follows:—

“A careful examination of the specimen shows that it is an animal membrane in a high degree of fatty degeneration. The membrane is tough, cuts like tendon or fascia, and is distinctly fibrous in its structure. There are several places much darker than the chief mass of the tissue. Degeneration has gone on so far that it is impossible to get a *perfect* idea of its histological structure, but enough remains to see that it is essentially fibrous. The dark portions were pigmented, and there were some hæmine crystals found in different places. It certainly is neither a mucous membrane nor a croupous one. The size and shape of the piece seem to indicate that it came from a somewhat large mass. I am inclined to regard it as a portion of a degenerating fibroid tumor,—considering the place it came from and its structure,—though why the patient does not suffer from the symptoms of auto-infection I do not see so plainly.”

This communication served to puzzle me more than ever as to the nature of the disease. I was positive that there had been no clinical evidence of the presence of a fibroid tumor throughout the case, and requested Dr. Cutler to report upon three subsequent specimens, which he did as follows:—

“An examination of that mass shows less of a dense fibrous structure than that seen at first. It looks decidedly more like an extraordinarily tough croupous membrane than the first specimen I examined.

“November 17, 1879.”

“The little fragment which you left me the other day is distinctly of the nature of a croupous membrane. That is, it is composed of coagulated fibrine, holding in its meshes some degenerated cells. I suppose the others were the same.

“December 1, 1879.”

“Some of that matter looks like granulation tissue, and some like croupous membrane.

“December 13, 1879.”

In the mean time the disease apparently had in some way acquired unusual activity, so that, in spite of the repeated application of the dull, and occasionally of a sharp, curette and the use of strong caustics, the mass increased both in the upper portion of the uterus and in the lower portion where a tumor projected within the cervix as large as a hazel-nut. The uterus became still more enlarged and less freely movable, and the cervix acquired a hard brawny feel. There was, too, some pain and tenderness upon movement. On January 2d, at about the time of my visit, a rather profuse hæmorrhage occurred, which, however, soon ceased with the employment of ergot. This was the only occurrence of flowing which the history of the case afforded, except at the very commencement of the affection.

Owing to the evident rapid development of the disease, the increasing discharge, the failing strength and general deterioration of the vital powers, I advised a radical operation under ether for the thorough removal of the disease, so far as this could be accomplished. This proposition received a ready assent, and on January 30, 1880, the operation was done by means of the finger nails and large, sharp curettes and scoops. A large quantity of diseased material was removed, apparently from the entire interior of the body and two thirds of the upper margin of the cervix, with considerable hæmorrhage, but unfortunately a specimen reserved for microscopic examination was thrown away by my servant. The patient rallied quite well from the immediate effects of the operation, but subsequently required daily uterine injections and frequent intra-uterine applications and curetting in order to keep under control the decomposition and attending stench, which would ensue in a brief space of time. In spite of this constant attention, a second formidable operation was done on April 15th, ten weeks after the former one. A specimen saved at this time gave the following report:—

“I have examined that specimen and find it more suggestive of a croupous membrane than anything else, though it is rather obscure.

“April 16, 1880.”

From this time the patient maintained about the same condition for many weeks, suffering from no pain, complaining principally of weakness, but more of the annoyance which the daily routine of disinfection and cleansing necessitated. On two or three occasions she had pretty smart chills with rise of temperature evidently due to the plugging of the cervix with decomposed material and, therefore, considered to have been septicæmic in nature. The release of the plug, thus affording free escape to the discharges, prevented a repetition of this accident. There was no chronic septicæmia, for a constant watch of the temperature was kept, and this was found to average under 99° F.

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¹ Read before the Boston Society for Medical Improvement, November 12, 1883.

[illegible]

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the situation.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete each task.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves assessing the outcomes against the objectives and goals and identifying any areas for improvement.

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far as could be observed, without the slightest effect upon the disease. As before remarked the uterus gradually lost its mobility, became larger, and in the middle of June firm adhesion had been made with the intestine into which an opening formed at a point in the fundus corresponding to that where the disease was first detected. The fæces now were discharged per vaginam. The strength began to fail more rapidly. Treatment was abandoned, and attention given only to afford the greatest comfort. Still there was no actual suffering in the way of pain, but she gradually sank from exhaustion, and died July 12th, within one month of two years from the time of my first visit to her, and two and a half years from the initial hæmorrhage. Permission was obtained, at the last moment, for a partial autopsy, and the portions removed were kindly examined by Dr. Cutler, whose brief report is as follows:—

"The vagina was smooth, and the rugæ gone. There were small ecchymoses on the surface of the mucous membrane. The color was rather slaty.

"The interior of the fundus and cervix uteri was one general sloughy mass of the same general appearance as the fragments previously examined. They were grayish, stinking, and evidently consisted of changed and infiltrated uterine tissue.

"The fundus was pretty generally destroyed, and but little of the wall was left. There was an opening into the rectum at the upper part of the fundus admitting four fingers. The tissues of the rectum at the edges of the opening were fungous, and on squeezing them there exuded a milky-white juice, as if issuing from a pepper-box. The bladder was healthy. The intestines were matted together and adherent over the surface of the uterus. No enlarged glands were found. Microscopically the disease was of a malignant nature."

I have taken pains to give the history of this case in detail, for it belongs to an interesting series of cases, few in number, which have been described from time to time as they have been observed within the last few years. In this instance I was enabled to follow the case closely, almost from its incipency to the end. In the main it corresponds very well with the description given by Goodell in his *Lessons in Gynæcology*. Many of us are familiar with the so-called benign disease which has been designated by various names: endometritis hyperplastica, endometritis polyposa, fungous granulations of the endometrium, *fungosités intra-uterines*, etc., etc.

Another form of disease, malignant or quasi-malignant in its nature and history, has received the name villous degeneration of the endometrium, villous cancer, and papillary cancer of the uterus. I had under treatment a few years ago a case of this kind. In macroscopic appearances the case in hand bore a striking resemblance to that one of papillary cancer, when it was left to itself for a time, and the diseased mass growing most rapidly in the direction of the least resistance soon formed a tumor which projected within the cervix. Yet the microscopic examinations by Dr. Cutler could not ally the two cases. Sarcomatous degeneration too must be excluded, for throughout the case there appears to have been no evidence to place the disease in this class of tumors. Yet cases have been reported, where it has been a difficult matter, if not impossible, to decide with a given specimen whether or not it was sarcomatous. In the course of a discussion at a meet-

ing of the Obstetrical Society of Boston, as reported in the *Boston Medical and Surgical Journal*, October 10, 1878, Dr. Fitz remarked that he had been unable to distinguish these cases as being sarcomatous or not in one or two instances where he had examined specimens. At all events the affection has an element of obscurity about it, which makes each case of great interest. In the matter of diagnosis and prognosis I will venture to offer the opinion that if a woman previously healthy, especially if she be of full habit and bulky, *who has already passed the menopause*, has a hæmorrhage from the uterus, followed by a leucorrhæal discharge, and a proper and intelligent examination discovers nothing abnormal except granulation tissue, or hyperplasia of the endometrium, especially if there is found a papillary increase of all the tissues of the interior of the uterus, then, I say, we shall be safe in giving an unfavorable prognosis. The affection, if left to itself, will shortly develop into an evident malignant form of disease. If treated carefully, intelligently, and constantly, it will be recurrent, will invade the adjoining tissues more extensively in every direction, and eventually prove fatal, and yet in its microscopic appearance it may never furnish absolute evidence of either epithelioma, carcinoma, or sarcoma. I think a careful study of the cases already reported (and I know of no better description of them than is given by Professor Goodell in his work, to which I have already alluded) will enable one to coincide with me in this opinion.

As to the treatment of such cases I imagine there is a large field open for discussion in these days of wonderful successes in abdominal surgery. The histories of all recorded cases denote absolutely that something ought to be done to arrest hæmorrhage, to diminish or alter uterine discharges, so as to avoid bad odors and prevent septicæmia; in other words, life may be prolonged and made more endurable by means of the intelligent use of the curette and intra-uterine applications of various kinds, fluid and solid, styptic, alterative, caustic, escharotic, antiseptic, and deodorizing. Meanwhile, the digestive functions need to be kept in good order, and the general system will require constant tonic, perhaps stimulating, treatment. The question as to the advisability of the entire removal of the uterus will occur to every one. So far as I am able to judge from a pretty careful study of the cases reported up to the present time where the uterus has been removed, in one way or another, for malignant disease, it would appear that all might unite in expressing the opinion that cases such as I have related are just the ones where this operation is demanded; for they usually will be recognized early, when the disease is limited to a small area, the uterus is movable, unattached by adhesions to the adjacent organs and tissues, there is no glandular or systemic affection; indeed the disease, at least until the very latest stage, appears to be an uncomplicated, purely local affection, and yet experience teaches that it is sure to recur, in situ. I know of no case which will serve to indicate that a similar disease occurs elsewhere in the system in the same individual, though I have an impression that Dr. Baker, of this city, once mentioned a case to me where something of the kind appeared within the vagina of one of his patients, and this recurred repeatedly after removal with the curette. What was the exact nature of the affection in this case, or what was the final result, I am unable to state.

If I mistake not the opinion of the medical profession which now survives the glamor surrounding the brilliant surgical exploits of Freund and other, mostly German, surgeons, I think I may safely assert that Dr. A. Reeves Jackson, of Chicago, Ill., accurately voiced that opinion in his paper presented at the last meeting of the American Gynecological Society, wherein, in his final argument, he asserted that:—

“Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except, in those whom it kills—nor gives reasonable promises of permanent cure in those who recover. Hence, it fails in all the essentials of a beneficial operation, and should not be adopted in modern surgery.”

But assuming that our knowledge of the natural history of the disease with which my case should be classed is sufficiently accurate, it would appear to be good practice under similar circumstances to advise an early resort to the radical operation for the removal of the uterus, before adhesions have been formed with adjacent structures, where the vaginal method could be employed with comparative safety, and the patient afforded every opportunity possible for permanent relief. Judging from the cases already reported, it appears to be the rule that they come under medical observation at a very early period in the development of the disease, differing in this respect from cases of true carcinoma or epithelioma; and, so far, they seem to suggest this as the proper mode of attack in the light of our present surgical experience.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

ON SUPPURATION WITHOUT THE PRESENCE OF BACTERIA.

In order to answer the question whether pus could ever be formed independent of the presence of the micro-organisms, Councilman¹ instituted a series of experiments under Conheim's direction. A number of capillary glass tubes were sterilized by fire and then filled with a mixture of one part croton oil and five parts olive oil. These were introduced beneath the skin of the back of a rabbit. After the slight wound of entrance had entirely healed (the time for which varied from three days to two weeks) the tubes were broken subcutaneously. At the end of a few days an indistinctly fluctuating tumor could be felt, which upon extirpation proved to be full of pus. In this there was not the slightest trace of bacteria to be found. Other experiments, for the purpose of control, were made in an exactly similar way, only substituting a weak solution of common salt for the croton oil. The swelling which followed was firm, and upon examination bits of glass were found to be encapsulated by solid connective tissue. This of course does not prove that the infectious processes do not cause suppuration, but merely that other irritants than those furnished by bacteria can give rise to the same phenomena.

AN EXTENSIVE MYCOSIS OF ANIMALS.

Under the above title Wolff² has published his investigation of the cause of death of the large number

of gray parrots (*Psittacus erithacus*), yearly imported into Germany.

The clinical symptoms were first, loss of appetite, with at times complete disregard of food. The birds then became dull and mopish, and their wings drooped. Soon diarrhœa set in; at first the fæces were thin and yellowish, but later mixed with mucus. There were six to eight stools daily and occasional vomiting of greenish yellow masses. With bristling feathers, and closed eyelids, the parrots cowered on the ground in a comatose condition. Towards the end convulsions appeared, in which the head was drawn down against the breast or under the wing, and in one of these spasms death occurred. Coryza, dyspnoea, cough, and râles, which, however, were not always present, pointed to a coincident affection of the respiratory tract. The course of the disease was from eight days to three weeks.

Anatomical appearances. No external wound of skin or mucous membrane. Heart and lungs with but slight changes.

Liver. Two dozen small gray or grayish white nodules shining through the serosa. On the cut surface the parenchyma was quite firm, bluish red in color, and studded with numerous grayish white nodules, denser than the surrounding tissue.

Spleen soft, bluish red, with numerous white foci in its midst.

Kidneys were hyperæmic, marked by small gray lines.

Mucosa of the stomach, pale, wrinkled.

Small intestines contained a large quantity of yellow watery material. Mucosa slightly swollen.

Sections were made from the liver, after having been hardened in alcohol, and were treated with concentrated acetic acid. The microscopic examination showed that in the midst of the whitish nodules there were yellowish brown lines, either straight or crooked, at times isolated, but more frequently anastomosing with one another in the form of a net-work. With a high power these resolved themselves into zooglœa masses or scattered micrococci. Staining with methyl, violet, gentian, or brown facilitated their demonstration. The same organisms were found choking the capillaries of the liver. Where they were present in the smallest numbers the walls of the vessel could still be distinguished as fine lines, bounded on either side by the bacteria, and containing with them numbers of red blood corpuscles stained in the same way as the parasite. In other places a thrombosis had extended for some distance along the vessels, which either were changed into thick bands or else, as was more frequently the case, they presented varicose enlargements. Similar plugs were also met with in the larger vessels, and finally in the midst of the liver tissue proper were free colonies, in the form of round or irregularly shaped balls, while in their neighborhood lay single scattered organisms, the form of which could be made out. This proved to be spheroidal, or occasionally more oval, so that the length (about one half millimetre) was twice as great as the breadth. These spheres were often united in pairs (diplococci) or in threes or fours.

The liver tissues appeared normal about the smaller foci, but near the larger ones marked changes were found. Here it was more transparent, and the columnar arrangement of cells was destroyed. Glancing cells (scales) devoid of nuclei, of a light yellowish

¹ Virchow's Archiv, Bd. xcii., s. 217.

² Virchow's Archiv, Bd. xcii., s. 252.

color, were seen in the place of the normal ones. No pus was noticed even about the largest centres.

The invasion of the lungs was extensive, although not so well marked as in the liver. In at least every third preparation thrombi of micrococci were present in the capillaries, some of which were dilated, and they were also seen lying free in the parenchyma of the lung. There was, however, no change in the tissue either in the form of necrosis or cellular infiltration; at most the collateral vessels were slightly fuller than usual. The alveoli contained a few cells in which were shining granules of unequal size. The greater part of the alveoli and bronchi were unobstructed.

In the spleen there were extensive deposits of micrococci, lying free in the parenchyma either as round or oval individuals, or united in short chains of threes or fours.

In the kidneys the parasites were found in the vascular system of the glomerulus, and in that surrounding the tubules. In various places the vessels had been perforated, and the micrococci were in the tissues or else occupied the tubules, which were distended by them.

The other organs, as well as the intestinal tract, were free from the presence of the organism.

In regard to the relation in which the bacteria stand to the economy of the animal, there are two cases to be considered. The first when they are present in small quantities, and are still separated from the glandular elements by the vascular walls. Under such conditions they do not need to enter into a struggle for existence with the surrounding cells, as they can easily receive a sufficient supply of nutriment. In the second case, where there is an extensive growth of the parasite outside of the vessels, the bordering elements give evidence of a marked pathological change, coming under the head of tissue necrosis. (Clear, glancing look, indistinctness of cell outline, and disappearance of the nuclei.) It is only after this has proceeded to a high degree that inflammatory (purulent) changes are manifested.

In the parrots this never reaches the inflammatory condition, which is rather remarkable, as in other forms of infectious disease (pyæmia, diphtheria, erysipelas, etc.,) this latter stage is found associated with the slightest changes of the affected part.

The ætiological factor is to be sought in the crowded and ill-ventilated cages in which the birds are kept during the passage. The point of entrance for the parasite is probably the lungs.

Of the other mycotic processes with which birds are troubled (splenic fever, ulcerative endocarditis, diphtheria) the *cholera des poules* of Pasteur is the only one with which it would be likely to be confounded on account of its clinical symptoms. In the last named disease, however, the pathological changes are entirely restricted to the intestines, which are uninvaded in the disease under consideration.

In epidemics it is of the greatest importance to look for the source of infection not only in man himself, but also in the household animals, which are found to suffer from the same infectious diseases that he does. Attention has already been directed to the larger animals, but as yet little attention has been paid to birds. The ways of infection of man are so much enveloped in darkness as yet that it is of the utmost importance to be careful with household pets, like the gray parrots, which so often suffer from mycotic disease.

THE MICROCOCCUS OF PNEUMONIA.

Ziehl¹ has given an account of the micrococcus which he has found in the sputum of patients suffering with pneumonia. Klebs was the first to call attention to the occurrence in lungs, and his observations were corroborated by Eberth, Friedlander, and Koch. The organisms which were found in the cadaver were of an ellipsoidal shape, their length about one millimetre, with a breadth of one third less. Round forms also occurred, joined together as diplococci or in short chains. In the fibrous plugs filling the bronchioles they appeared as flat masses which were in close proximity to each other. This post-mortem discovery was confirmed by Leyden, who obtained them from the living subject by means of direct aspiration of the lung.

The parasites discovered by the author in the sputum corresponded with those already described; they were only found pure in the earlier part of the disease, while in the later stage, especially near the crisis, they were mixed with a variety of other forms. Preparations were made by drying the sputum on a cover glass and staining with gentian violet.

In all cases where they were found the disease was considered to be of the infectious type. Their presence may possibly be of value in determining whether there are two types of pneumonia. As, for example, the pneumonia which follows contusions of the chest is considered by some authors as being simply an extension of a pyæmic process inwards, while others, among them Ziehl himself, regard the trauma as simply furnishing a proper soil in which the specific organism can develop.

MICROCOCCUS OF GONORRHEA.

Eschbaum² has given the following method for demonstrating this form of bacteria. A little of the discharge is dried upon a cover glass by rapidly passing it through the flame of a spirit lamp three or four times. It is then allowed to float with the prepared slide down for fifteen to twenty minutes in a watery solution of gentian violet, afterwards placed for a few seconds in absolute alcohol, dried over a lamp, and mounted in Canada balsam.

A CONTRIBUTION TO THE PATHOLOGY OF OLD AGE.

This has been the subject of an article by Somerbrodt,³ from his experience in the Pensioners' Hospital at Berlin from 1873 to 1877. Twenty-five autopsies were made on men over seventy years of age. Acute disease, as has been generally noticed, occurs but rarely, and when present is generally connected with the organs of respiration. The heart was affected in but few cases, while in every case evidences of endarteritis were to be seen. Chronic inflammatory changes were frequent in the meninges, while hæmorrhage into the substance of the brain was rare. Gall stones, which in extreme old age never caused colic, were found in eight cases. Malignant disease (cancer of the prostate) presented itself but once. The course of such troubles is probably run in previous decades. Pleural adhesions were often met with, but exudation into the pleural cavity very seldom.

In about one half the cases tubercles, that is, cheesy

¹ Centralblatt f. d. med. Wissensch., 1883, s. 434.

² Deutsch. med. Wochens., 1883, No. 13. Centralblatt f. d. med. Wissensch., 1883, p. 608.

³ Centralblatt f. d. med. Wissensch., p. 601.

centres, were scattered throughout the lungs, and this was notably oftener the case in persons who were quartered together in barracks than in those who had a separate dwelling. This fact, the author thinks, points to the contagiousness of the disease. In general its course was run almost without symptoms; especially was it to be remarked that hæmoptysis was absent in the majority of the cases.

THE MANNER OF ORIGIN OF THE ANENCEPHALIC FETUS.

Ribbert¹ has encountered two fetuses in animals which give a clew to the way in which this malformation originates.

Three theories have been proposed in explanation of this: (1) pressure upon the skull of the embryo by the amnion, and a union of the two; (2) early hydrocephalus which prevents development of the brain, and which ruptures before birth (this is the one generally accepted); and (3) an extreme bending of the anterior end of the embryo at a time when the spinal column exists as a furrow or has only just closed over.

The cases described apparently point to hydrocephalus as the most probable cause. One occurred in the embryo from a goat and the other from an ox. In neither case was there a union of the amnion with the skull, nor did the cord present any abnormality.

On the top of each head was a longitudinal defect in the cranium, surrounded by a slight wall about one millimetre high, recalling the ruffle of a shirt. On one of the specimens this was divided by a transverse septum into an anterior and a posterior portion, from which led two openings into the interior of the head. Through the posterior a bristle could be passed for some distance towards the bend of the neck, while anteriorly it soon met with an obstacle. From the overhanging edge of the wall shreds of delicate membrane floated. The length of the defect was about five millimetres, and its breadth to its length as two to three. The second embryo presented a similar condition, only the septum was not so well marked between the two openings, and the anterior opening was spanned by a very thin membrane, leaving a space the size of a needle between it and the posterior wall. The figures given in the text show clearly that there has been a defect in that part of the skull covering the middle cerebral portion and caused by an accumulation of fluid within (hydrocephalus).

ON THE PATHOLOGY OF ASTHMA.

Riegel and Edinger² investigated whether asthmatic attacks, especially those in which an emphysema was rapidly developed, were produced by cramps of the bronchi (Biermer) or by spasm of the diaphragm (Wintrich). First they proved the capability of the bronchus for contraction. They found, in accordance with the experiments of earlier observers, that the unstriped muscle of the air passages could be excited to contract by irritation of the vagus. The amount of spasm caused in this way, however, was very small. Long-continued stimulus, however, produced emphysema.

If the vagus was cut and the peripheral cut end excited the emphysema did not take place, but only by

acting upon the central end. Therefore it followed that this did not depend upon a narrowing of the bronchi from direct irritation through the vagus, but a reflex irritation of the inspiratory tract from the vagus. Further it was found that after section of the phrenic nerves, irritation of the vagus was followed by no distention of the lungs.

The authors think that the emphysema of asthma is the effect of a reflex diaphragmatic cramp. In proof of this they show that over distention of the lungs could be produced by irritation from the inhalation of ammonia gas so long as the vagus was uninjured. Yet they are not of the opinion that spasm of the midriff alone is capable of explaining all the features presented by asthma.

ON THE RENAL CIRCULATION DURING FEVER.

Mendelson³ has studied the variations in the size of the kidney by means of an ingenious apparatus called the oncometer, or bulk measurer, designed by Conheim and Roy.

The kidney is first exposed by cutting through the muscles of the back in the lumbar region, and carefully tying all the small vessels. It is then brought out through the wound and placed in the machine, which consists, briefly, of a double box, the inner wall of which is made of the peritonæum of a calf, and the outer of thin brass. The space between the walls is filled with olive oil, and connected by means of a tube with a kymograph, upon which any variation in the size of the organ can be recorded.

In dogs in which complete motor or sensory paralysis or both had been caused by narcotics there was found to be a marked fall of temperature. In order to obviate this, insensibility was produced by puncture of the thalamus. The skull was trephined about five millimetres on either side of the median line, at the point of greatest cranial convexity, about four to five centimetres in front of the prominent occipital tubercle. A small slit was made in the dura mater, and a blunt glass rod, about two centimetres in diameter, was pushed directly downwards towards the base of the skull till it struck the bone. Animals thus operated upon were rendered insensible and motionless, and pyrogenic agents caused a marked rise in temperature.

The substance used to cause this was pepsin, five grammes of which, dissolved in fifty cubic centimetres of water, were injected into a vein. With the advent of the fever there was a diminution in the size of the kidney. This could also be effected by surrounding the carotids, which had been laid bare, with hot water. From these experiments he concludes that the decrease in bulk of the kidney during fever is due to contraction of its vessels, probably resulting from a stimulus conveyed to them from the central nervous system, — this stimulus being in consequence of irritation of the central vaso-motor centres by the abnormally hot blood circulating through them during the fever; and in addition he found that the contraction is constant and progressive, being proportionate to the intensity of the fever.

This anæmia of the kidney he thinks explains satisfactorily the diminution in the quantity of urine, and also the albuminuria; the albumen being allowed to pass through the epithelium of the glomeruli, which, having been insufficiently nourished by the small supply of arterial blood, loses its albumen-retaining power.

¹ Virchow's Archiv, Band xciii., s. 396.

² Arch. f. klin. Med., vol. v., p. 413. Centralblatt f. d. med. Wissensch., 1883, p. 409.

³ American Journal, clxxii., October, 1883.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. SUCKINGHAM, M. D., SECRETARY.

NOVEMBER 12, 1883. DR. CHARLES D. HOMANS presided.

DR. FRANCIS MINOT reported

A CASE OF HERMAPHRODITISM.

The patient was nineteen years old, and had always been supposed to be a female. She was tall, bony, and had a deep bass voice. The breasts were not developed, and there had never been any menstruation. There was no beard. There was an enormous clitoris resembling a glans penis, having a prepuce which was easily retracted, and which was fissured at the lower part, looking like a case of circumcision. There was a depression at the usual situation of the urethra in the glans, but no true meatus, which was situated below the clitoris as in the female. Below this was the vagina, two inches in depth, and partially closed by a hymen. Neither uterus nor ovaries were found. There was a swelling in the left labium when the patient strained, which was apparently a hernia. There was no sexual feeling, and the patient appeared to have no preference for the society of either sex.

DR. W. W. GANNETT stated that in a recent number of the *London Medical Record* are accounts of twelve or fifteen similar cases taken from Russian sources.

DR. W. E. BOARDMAN reported

A CASE OF MALIGNANT DISEASE OF THE UTERUS.¹

DR. WM. H. BAKER spoke of the interest attaching to this exceedingly rare class of cases; the disease, situated within the uterus, having the general microscopic appearance of benign disease, but frequently recurring and becoming malignant. So far as he knows none like it have been reported. In one similar case of his own he dilated and curetted the uterus. Six months later disease appeared on the cervical membrane. This looked like hypertrophied utricular glands, although the utricular glands proper are in the body of the uterus. He tried cutting away the neighborhood of the canal, but this was followed by contraction partially occluding the os. In a few months there was hæmorrhage. He then dilated and used the sharp curette and nitric acid. This was followed by pelvic peritonitis. The patient recovered, and disease next appeared on the vaginal wall. He now used the sharp curette and the actual cautery, and this was repeated for the same cause two or three months later. A year after, the hæmorrhage returned, when he examined and found the body large. There is no disease in the vagina and none in the cervix as far as can be seen, but there is little question as to the body. In a second case which is now under observation, he has twice thoroughly removed the diseased tissue with a sharp curette. The last operation was five or six months ago, and the patient now seems to be doing well.

He would agree with Dr. Boardman that having hæmorrhage occurring after the menopause, together with activity of any growth removed from the uterus, however benign it might seem to microscopic examination, the only hope for the patient is in removal of

the uterus. The operation would be more hopeful than in cancer, and he would give the patient the chances. He would not be understood as condemning removal of the uterus for cancer, although in that disease, as it will return, if it is limited to the cervix, he thinks there is a safer operation.

DR. J. G. BLAKE remarked that he had had no experience in treating malignant disease of the uterus such as had been reported, his cases having been confined to the cervix and not extending to the body of the womb. An important point in the diagnosis, and upon which gynecologists laid great stress, was the value of hæmorrhage occurring after the climacteric and where there was an absence of fibroid or other cause for it. Some writers insist that this alone is an unfailing indication of malignant disease, even when the microscope, as in this case, did not corroborate it in its early stage.

In relation to the treatment, he was decidedly in favor of recommending the removal of the entire uterus rather than to trust to the unsatisfactory local treatment, which in all cases thus far reported has terminated fatally. In these days of brilliant success in abdominal surgery, and in the light of recent operations reported to this Society, he could not but think that the time was near at hand when the radical operation would be more freely resorted to, and with better success than had thus far attended it. The difficulties are not greater than in many of the ovariectomies complicated by adhesions, and while the shock attending the removal of an important organ like the uterus might be more severe, he felt that the invariably fatal result under present methods of treatment would justify the operator in taking the greater risk.

DR. C. M. GREEN said that, in the opinion of some men, giving a bad prognosis to the patient in a case of cancer, or even telling the patient herself that she has cancer, is liable to react very unfavorably upon the disease. He would like to ask the opinion of the Society as to our duty in the matter of prognosis.

DR. G. H. LYMAN said it must depend on circumstances, including the character of the patient; some will bear such news with equanimity; others will not. He prefers to tell the friends, and leave the matter to their judgment; but if the question is asked by the patient the truth should be told gently and considerately, provided the physician's own mind is fully made up.

He believes that removal of the uterus will be more and more successful, and that the operation is destined to rank with ovariectomy. Although some Continental statistics have been very bad, yet Dr. Keith has published some nine or eleven cases, all that he has had at the Edinburgh Infirmary, and with uniform success. It is true that most of these were for fibroid tumor, but Dr. Lyman does not see why in malignant disease an early operation would be less successful as an operation. The liability to recurrence of disease in neighboring tissues is a separate question. He doubts if the curette or partial removal by the knife will be of any more service than caustic washes, and believes that neither of them do more than give temporary relief. If any serious operation is to be done the entire removal of the uterus would seem to be the only procedure to follow, and even that so far, presents little encouragement as to ultimate success.

DR. R. H. FITZ referred to the post-mortem examination of a case of diffused cancer of the body of the uterus whose clinical course resembled that described

¹ See page 488 of this number of the JOURNAL.

by the reader. The patient was between thirty and forty years of age. The immediate cause of death was a thrombosis of the cerebral sinus, due to the marasmus resulting from the long-continued, profuse, watery, and hæmorrhagic discharge from the uterus. The condition of this organ illustrated the difficulties in making a diagnosis from the microscopic examination of scrapings from the uterine cavity. It also explained the inefficiency of the usual methods of treatment in producing a radical cure. The uterus was enlarged to the volume of the two fists. Its wall was of moderately increased thickness, but its cavity was greatly distended, readily containing the fist. The inner surface was covered with partially decomposed shreds of soft, friable tissue, in part adherent, in part readily floating in a stream of water poured upon the organ. After the detachment of these shreds the muscular substance of the uterus was found trabeculated, suggesting the ventricular walls of the heart or a specimen of trabecular hypertrophy of the bladder. The new formation extended into the uterine wall, burrowing its way between the muscular bundles, dissecting them out, and closely approaching the peritoneal surface.

The customary treatment of such cases obviously affects merely the surface, not the diseased substance of the uterus, and no radical treatment can be of avail which does not include the removal of the organ as a whole.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDÉ, M. D., RECORDER.

THURSDAY evening, October 25, 1883. The President, DR. TYSON, in the chair.

DR. SEILER read a paper on the Pathology of Phthisis and its Laryngeal Complications, in which he gave his views regarding the pathology of tuberculosis and of phthisis and of the laryngeal complications of the two diseases. He defined tuberculosis as an auto-infectious disease, manifesting itself primarily by the production of minute neoplasms called miliary tubercles, which rapidly undergo retrograde metamorphosis, ending in caseation, being due to the dissemination of infectious material throughout the lymph channels. This infectious material consists in cheesy matter, due to scrofulous inflammation, which may remain incapsulated for a long period. He then described the histological characteristics of tubercles, and showed how they could produce consolidation of the lung tissue by exciting secondary inflammation.

The doctor then entered upon the consideration of the disease known as phthisis, and gave the following definition of it: Phthisis is a progressive consolidation of the lung tissue, due to a more or less localized inflammation, affecting primarily the apices, and undergoing retrograde metamorphosis; it is an inflammatory disease. He then gave a description of the pathological processes, as they are observed in the lung tissue during the progress of the disease, and gave it as his opinion that the different forms and stages of phthisis, as they are described by many authors, are merely differences in the severity and extent of the ulcerative process. As ætiological factors he mentioned the various causes which produce a lowering of the vitality of the general system, thereby producing a predisposition on the part of the respiratory organs to chronic inflammation. Among others, he named heredity, peripheral nerve irritation, hypertrophic nasal catarrh,

insufficient aëration of the blood, etc. An elevation of the vitality of the system at large would prevent an outbreak of the disease or lead to recovery in cases where not too much lung tissue had been destroyed. This elevation was to be produced by proper feeding and healthful exercise in the fresh air more than by the exhibition of drugs. On the other hand, tuberculosis was always fatal, and treatment was of no avail; but a great deal could be done to prevent the formation of the initial formation of the cheesy deposit by elevating the system of scrofulous patients early in life, thus preventing the outbreak of tuberculosis later. The laryngeal complications of both diseases were then considered in detail and their differences pointed out. So, according to the lecturer, the laryngeal lesions never appear prior to the lung disease in phthisis; they are characterized by a peculiar pallor of the mucous membrane; the tumefaction generally affects the posterior portion of the organs, and the ulcerations are shallow and have a tendency to spread on the surface. Tubercles or cheesy deposits are never found in the tissues of the larynx in phthisis. In tuberculosis, on the other hand, tubercular deposits have been found in the larynx prior to the lung complication, the mucous membrane is of a livid red color, the tumefactions are more commonly observed in the anterior portions of the larynx, and the ulcerations are deeper, with raised edges, and often extensive destruction of tissue.

The paper closed with the remark that the indiscriminate use of the terms phthisis and tuberculosis when speaking of lung diseases in our literature was calculated to mislead the student and make careful investigation into the pathology and ætiology of these diseases extremely difficult if not impossible.

DR. J. C. WILSON being called upon by the President, said that he had listened with interest to the reading of the paper. The field covered by the writer is too great to permit the points to be discussed in detail. Two points, however, appeared to warrant comment. First, Dr. Seiler had several times used the expression, "tuberculous material not derived from the exterior." If he had understood the paper aright, Dr. Seiler had not indicated his views as to the nature and source of this "tuberculous material." Does he follow the older doctrine, that of Baker? or has he some new opinion as to the ætiology of tubercle? Secondly, Dr. Seiler failed to make clear his means of recognizing tubercle, either clinically or in the laboratory. It would be of interest to hear the writer's views upon this vexed question. In a recent work, Hamilton of Aberdeen again seeks to establish a histological criterion for tubercle — the presence of giant cells under a peculiar arrangement. This pathologist points out two modes of degeneration for tubercle: (1) caseous; (2) fibroid. To the latter Dr. Seiler makes no allusion.

He thought further that the author of the paper had scarcely emphasized with sufficient force the presence of tubercle among the lesions in the various forms of phthisis as seen in post-mortem examinations.

He heartily concurred in the hopeful views as to the curability of certain forms of chronic lung disease when treatment is instituted at an early period. Nothing has exerted a more unfavorable influence upon the therapeutics of such diseases than the false view that the constitutional tuberculous diathesis invariably antedates the local lesions of pulmonary consumption.

DR. F. P. HENRY remarked that Dr. Seiler's paper was so comprehensive that he found it impossible to

refer to more than a few of the points contained in it. He was not inclined to draw so broad a line of distinction between that form of pulmonary disease in which miliary nodules predominate and that in which the deposit is in larger caseous masses. Like Dr. Seiler, he was by no means convinced of the primary importance of the bacillus as a cause of tuberculosis, but was inclined, however, to attribute to it a prominent part in the production of the secondary symptoms of phthisis, those of systemic infection, which are largely septic in character. The symptoms of interference with oxidation caused by even extensive destruction of pulmonary tissue are subordinate to those of systemic infection caused by absorption of the contents of cavities. The presence of the bacillus in the contents of these cavities is indispensable to the production of changes capable of producing this systemic infection. A small ulcerating cavity communicating with the absorbent vessels is more disastrous in its effects than a larger cavity shut out from the absorbents by a lining membrane or wall of fibroid tissue. He understood Dr. Seiler to deny the existence of the giant cell and to make the statement that cross sections of blood and lymph vessels have been mistaken for it. Dr. Henry did not agree with him in this view, but thought the irregular contour of the giant cell and its granular protoplasm were sufficiently characteristic. Additional evidence of the existence of this cell was furnished by the experiment of introducing beneath the skin of an animal two thin glass covers fastened together. In the interspace of the glasses giant cells have been found, and in such an experiment there can be no question of the cross section of vessels. Dr. Seiler had several times referred to what is known in this city and elsewhere as Formad's theory of tuberculosis, which is that in certain animals predisposed to phthisis, and presumably in some human beings, the lymph spaces are abnormally small, or, in other words, that in a given area of tissue there is to be found a greater number of endothelial cells than in non-strumous animals. Dr. Henry did not think this theory should be so extensively quoted until some more serious attempt had been made to establish or refute it. This might, he thought, be readily done by counting the cells in a given area of the tissue of strumous animals and comparing their number with that contained in the same area of tissue of non-strumous animals. He did not think any greater difficulty would be met with in this attempt than has been successfully encountered in the enumeration of the blood cells.

Dr. BRUEN said that he believed in a hopeful prognosis in the early stages of many varieties of phthisis; even when the process of phthisis was advanced, the management of cases was more successful when the lesions are localized; less advanced lesions are more grave when the lesions are widely disseminated. Dr. Bruen thought that it had been proven that phthisis could be produced by inhalation of inorganic irritating particles, especially if there was inherent predisposition to phthisis, or an artificially damaged constitution. May not bacterial elements be among the irritants capable of developing phthisis, when inspired in large numbers, and he thought they might be even more capable of creating damage than inorganic materials, because they possessed the power of proliferation. Dr. Bruen agreed with Dr. Seiler in his views in the main, and considered his paper most instructive and interesting.

Dr. MILLS thought it worth while to note the frequent occurrence of tuberculosis among those afflicted with chronic nervous and mental diseases. At the institutions for the Feeble-Minded and Insane phthisis or tuberculosis is a common cause of death. This fact he thought would lend support to the views of Formad rather than to those of Koch.

Dr. J. T. ESKRIDGE had observed that some who had participated in the discussion referred to the views of the pathology of tuberculosis expressed in the paper of the evening, and to those entertained by Dr. Formad, in order to prove the same thing. He regarded the theories of each of these men as widely different. If tuberculosis is the result of inflammation in a person whose lymph channels are abnormally narrow, as claimed by the latter, he could not see that phthisis differed from tuberculosis as maintained by the former. In regard to tuberculosis being frequently developed in chronic diseases of the brain and cord throwing light on the pathology of the former, he thought the association of these diseases proved nothing more than that a prolonged period of lowered functions of the body was a favorable condition for the development of tuberculosis. He confessed that he did not know what to believe with reference to the pathology of tuberculosis; enough, to his mind, had not been proved to firmly establish any theory yet advanced, so that it might be accepted as positive fact. Dr. Eskridge agreed with Dr. Shakespeare in demanding more pathological investigation following the clinical observation of the disease before he could accept any view as positive of the pathology of tuberculosis. Dr. Eskridge called attention to the fact that many of the best clinical observers of large experience, such as Flint, Da Costa, and Hughes Bennett, considered tuberculosis and phthisis to be identical.

Dr. DAVIS asked Dr. Seiler if he taught that tubercle was caused by a caseous focus? He was answered, Yes. It is important to know whether this is the case or not, as the German surgeons excise caseous glands not so much for the deformity they produce as to obviate the liability to general infection. Would Dr. Seiler sanction this practice? As regards the possibility of cure he believed with Koster, Billroth, and Koenig that tubercle is a local affection, and not a general disease. He has seen as marked tuberculosis in the knee as in the lung, the miliary tubercles being within an eighth or quarter of an inch of each other. He has also seen tumor albus of the knee recover without operation. If the tuberculosis can get well in the knee he believes that it can, in some cases, get well in the lung also.

NEW YORK ACADEMY OF MEDICINE.

THE DEATH OF DR. SIMS.

At a meeting of the Academy held November 15th the Statistical Secretary, Dr. F. V. White, announced the death of Dr. J. Marion Sims, and the President, Dr. Fordyce Barker, made, with much feeling, a brief eulogistic address, in which he said that in the death of Dr. Sims the Academy and the profession not only of New York but of the whole country had lost its most brilliant and original genius in surgical gynecology. This was conceded by all, and no one was anywhere to be compared to him, with the exception, perhaps, of

the late Sir James Y. Simpson. He had been intimately acquainted with both these two eminent men, and he thought that they possessed much in common; their resemblances being much more marked than their dissimilarities. To speak only of the chief work of each, the one had secured enduring renown by his courage and ardent zeal in the successful introduction of anæsthetics for the relief of the agonies of parturition, and the other in the device of new methods of physical exploration and surgical procedure. Both were incessant, zealous workers, who for many years were continually making contributions of positive value to medical knowledge; the former adding more to scientific literature, and the latter more to the practice of our art. Dr. Barker then announced that he would appoint Dr. T. Addis Emmet to read a memoir of Dr. Sims before the Academy in January next.

(To be continued.)

Medical and Surgical Journal.

THURSDAY, NOVEMBER 22, 1883.

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SUPPLEMENT, CONTAINING THE REPORT AND PAPERS ON PUBLIC HEALTH, TO THE FOURTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH, LUNACY, AND CHARITY OF MASSACHUSETTS, 1883.

AFTER the old Board of Health was swallowed up in the present triune Board, the old Health Reports, which had contained so many admirable papers on various important hygienic questions and are still referred to as authority at home and abroad, were continued for two years under the present title of Supplement to the Report of the Board, the last one appearing in 1881, and being for the year 1880.

Charity and Lunacy, however, were too many for Health, and the present volume appears after an intermission of two years, appropriations having been delayed.

All the papers in this volume, except that on Leprosy, by the Health Officer, Dr. Abbott, have been ready for publication for more than a year. The paper by Prof. S. P. Sharples, on the Adulteration of Food and Drugs, was originally prepared when the desirability of submitting a bill to the Legislature for the prevention of adulteration was under consideration. The Legislature eighteen months ago passed such an act, placing its execution and an appropriation therefor of \$3000 with the Board, which drew up a series of rules based upon the recommendations of the National Board of Trade, and appointed an analyst of food and

an analyst of drugs. Professor Sharples' contribution to the report is a concise, unsensational statement of questions relating to his subject, which a fifteen years' general acquaintance with it and special experience as a private analyst have qualified him to make. He states his belief "that, outside of the single article of milk, injurious adulteration is by no means common, and fraudulent adulteration is but little more common than injurious adulteration." This latter part of this statement, however, it seems to us, can hardly be regarded as accurate until every package of mixed goods is made to exhibit a statement that the article is mixed, as is now the law in England. The analysts appointed by the Board actually entered on their duties about a year ago. We have as yet seen no published report of their results, nor have there been any prosecutions, although we believe several are now pending against vendors of adulterated drugs and milk. The analyses of milk samples, we understand, showed the adulteration of this important article of food to be so extensive that an additional appropriation of \$2000 was found desirable, and made by the last Legislature for the execution of the Act of 1882 against this one article alone. The detection, exposure, and prosecution of offenders against any act for the protection of food and drugs are attended with many difficulties, not the least of which consists in the fact that the very consumers in whose interest the government analyst or inspector labors are found, not seldom, to side with the dealer against whom it is sought to shield them, resenting the imputation that they are not able to manage their own affairs and buy their own food. It is only by much practical experience with the working of such laws that the best forms are reached, and after all her legislation upon the subject of adulteration, the operation of present laws in England is still found quite unsatisfactory.

Dr. Jeffries, in a paper on our Eyes and our Industries, discusses a very important subject in a vigorous manner, and sets forth some of the causes which tend to produce defective eye-sight among the scholars in our schools. Apropos of the poor paper and type used in making school text-books, a résumé is given of Dr. Javal's Physiology of Reading, in which examples are given of various kinds of type in actual use, and of ideal type as it should be. This part of the paper certainly appeals to all readers and printers.

The paper on Leprosy by the Health Officer of the Board, Dr. Abbott, is a compilation, with a bibliographical appendix, of the substance of the most recent contributions to the history, symptomatology, and mode of propagation of this disease, and was suggested by the recent appearance of a case at the Salem almshouse in the person of a former citizen returning from the Sandwich Islands via San Francisco. Another probable case of leprosy is, we believe, now under observation at Tewksbury. Such steps have been taken at San Francisco as to render the entrance of any more leprosy from the Sandwich Islands very improbable, but the Norwegian immigration continues a source of possible danger.

A considerable portion of the report is occupied by

the tabulated returns from seventy-one water boards and water companies throughout the State, received in response to a second circular sent out by the Board in compliance with an act of the Legislature passed in 1879 requiring all such boards and companies to make triennial reports. A uniform table will probably be required in future for water analysis for the sake of convenience in the comparison of waters of the State with each other, as well as with those of other States and countries.

A short and suggestive contribution from Mr. Ernest W. Bowditch on The Sewerage of Nahant, which should be read in connection with a previous paper by him on The Sanitary Aspect of Nahant, completes the volume.

The Health Officer devotes a few pages of the General Report to some remarks on Commercial Fertilizers or Artificial Manures. The regulation of manufactories of these products is a somewhat delicate though very necessary and urgent matter, the ultimate decision of which can hardly be left with safety in the hands of local boards of health as these are still too often organized, even in this State. Further legislation on this subject is desirable, as was well illustrated by the failure of the State Board in its attempt to regulate the works of the Standard Fertilizer Company, situated at the foot of Captain's Hill, near Duxbury. In this case the local board lent its countenance to the Fertilizer Company, and the local jury, to whom was the ultimate appeal, also found its sympathies enlisted on the side of the company.

We make the following extract from the report touching this subject:—

"The manufacture of chemical fertilizers or artificial manures has increased rapidly within the past twenty-five years, and assumed an important place among the industries of the State.

"The United States Census Report, 1880, gives the following figures relating to the manufacture of commercial fertilizers in Massachusetts:—

Number of establishments	21.
Capital invested	\$1,738,150.
Number of hands employed	570.
Value of products	\$2,164,680.

"The value of such works in contributing to the agricultural resources of the State cannot be questioned, and their maintenance should be encouraged as a useful and valuable industry. At the same time the processes of manufacture should be so guarded and restricted as to render them as inoffensive as possible to their surroundings by the choice of a suitable location of the works, and also by the adoption of such measures as shall remove as much as possible all offensive odor from the works resulting from the storage and handling of crude materials, the processes of manufacture, and the final disposition of the manufactured fertilizer.

"These points have already been referred to in previous reports of this Board, and the measures therein suggested have been complied with by several of the larger establishments in Massachusetts with manifest success. Water-towers, condensing shafts,

and the destruction of offensive gases by fire, have been employed in a satisfactory manner, and similar measures should be required of all establishments of the same sort, for wherever the work is carried on in the neighborhood of dwellings complaints are likely to become frequent from parties to whom the odors evolved may prove offensive.

"The act which concerns such trades and occupations provides that the State Board of Health, Lunacy, and Charity may order the persons or corporations to cease and desist from such business 'if, in their judgment, the public health or the public comfort and convenience shall require.' It is not necessary to measure the degree of offensiveness of noxious trades by the standard of the robust laboring man, especially if he is an employee in a factory of this sort.

"A charge of nuisance to public health is tenable when a considerable number of persons, whether invalids, persons of a delicate organization, or even such as are in perfect health, are so affected that their lives are rendered uncomfortable."

REGISTRATION REPORT OF MASSACHUSETTS FOR THE YEAR 1882.

THE forty-first report of the Births, Marriages, and Deaths in Massachusetts, edited by Dr. Frank Wells, shows, for the year 1882, the lowest birth-rate but one recorded in the State, the highest marriage-rate since 1874, a little less than the average death-rate, and a rate of excess of births over deaths of 4.62 to 1000 of the estimated population (1,921,179) as compared with a rate of 7.78 for the thirty years ending in 1880.

The living births, 47,155, give a birth-rate of 23.76, as compared with 28.88, 29.52, 25.36, 26.07, 27.62, 24.75, the averages for six quinquennial periods ending in 1880. The birth-rates for the year varied from 29 in the cities of 40,000 inhabitants and over, in a descending scale, to 16 in the towns with a population of less than 1000.

The ratio of males to females born during the year was 104.3 as compared with 105.7, the average for twenty-nine years. Of the 1485 still-births, the males were 147.7 to 100 females.

The illegitimate births were 865, of whom 482 had native-born, and 334 had foreign-born, mothers. In twenty years the rate of reported illegitimate births to all births has doubled. In 1882, 50.75 of the illegitimate births were in Suffolk County, containing our one large city.

The percentage of births of native parents and of mixed parentage, has been increasing; those of foreign parents, increasing from 1859 to 1871, have been since 1871 diminishing.

The 17,684 marriages recorded indicate 18.4 persons married to each 1000 of the population. The rate for the sixteen cities, with a population of 873,605, by the census of 1880, was one third greater than that for the rest of the State with 909,480 inhabitants.

The percentages of marriages by seasons was quite near the average, being, in order, 20.45, 25.98, 21.70, 31.87. The average age at marriage was 29.2 for men and 25.4 for women; of first marriages only, 26.5 for men and 23.9 for women. Fourteen thousand one hundred and eighty-two bachelors married maids, and 795 married widows; 1774 widowers married maids, and 845 married widows. There were 2689 widowers married, and 1710 widows. Thirty-seven and nine tenths (37.9) per cent. of the males were married between the ages of twenty and twenty-five; 30.8 per cent. between twenty-five and thirty; 13.3 per cent. between thirty and thirty-five. Forty-five and nine tenths (45.9) per cent. of the females were married between twenty and twenty-five years of age; 21.3 per cent. between twenty-five and thirty; 16.8 per cent. under twenty; 7.5 per cent. between thirty and thirty-five. Six hundred and seventy-nine men and 206 women were married over fifty years old; nineteen men and one woman over seventy-five, and three men over eighty. The marriage-rates indicate an increase in the marriage of natives with foreigners, the proportion having nearly doubled in twenty years.

The deaths registered in 1882 were 36,785, an increase of but 327 over the mortality of the preceding year, and 1493 over that of 1880. The death-rate per 1000 of the living population (19.14) was .38 per cent. less than the rate in 1881 (which in turn was .27 per cent. lower than that for 1880), .06 per cent. less than the average for the five years, and .11 per cent. lower than the average for the thirty years, previous to 1881. The mortality of children under the age of five was the lowest since 1872, and 3.83 per cent. less than the average for eleven years. With the decline also in the number of deaths from the "zymotic" diseases, the year must be considered as one of above the average health.

The sixteen cities have a death-rate one sixth greater than that of the rest of the State. The seasons showed a relative mortality in order of 24.14, 24.10, 28.67, 23.09, as compared with averages for twelve years of 24.2, 22.8, 29.4, 23.6. For the last five census years the average death-rate of males was 20.52, of females 19.28.

During the year 778 more males than females died under the age of five. Above the age of twenty, and particularly between twenty and thirty, the mortality of females predominated over that of males, as was the rule for the previous ten years; 20.22 per cent., or about one fifth of the total mortality, occurred under one year, and 31.23 per cent., or not quite one third, under five, — a proportion which is verified by the statistics of a period of years.

With 327 more deaths in 1882 than in 1881, there were 708 fewer deaths of children under the age of ten, and forty-three fewer between the ages of ten and fifteen. At all other ages, the number of deaths was greater. In the last census year (1880) the number of living persons recorded at the various ages was, under one, 37,587; under five, 179,307; from five to ten, 171,595; ten to fifteen, 161,425; fifteen to twenty, 167,595; twenty to thirty, 343,701; thirty

to forty, 264,413; forty to fifty, 203,515; fifty to sixty, 142,053; sixty to seventy, 91,619; seventy to eighty, 44,337; eighty and over, 13,525. The corresponding death-rates for that year were 191.28, 68.11, 8.52, 3.78, 6.58, 9.51, 10.29, 11.71, 17.86, 33.87, 73.14, 184.02.

The total death-rate from infection-diseases was less than for any of the previous ten years, the variations from year to year being shown in the following table:—

Years.	DISEASES.									
	Dysentery.	Typhoid Fever.	Whooping-Cough.	Croup.	Diphtheria.	Measles.	Scarlatina.	Cholera Infantum.	Small-Pox.	Total.
1872	564	1708	368	480	278	428	1877	3254	1029	9471
1873	485	1406	284	435	810	180	1472	2553	668	7723
1874	868	1147	449	411	502	161	1882	2322	26	6766
1875	487	1059	242	680	1200	288	1634	2908	84	8175
1876	417	881	192	684	2810	47	1222	2037	31	8171
1877	580	814	389	544	2634	135	467	1927	26	7496
1878	602	679	400	583	1934	805	404	1573	2	6482
1879	372	637	302	559	1734	19	850	1349	8	5830
1880	395	882	230	625	1769	236	574	2118	38	6967
1881	390	1072	217	677	1706	230	397	1861	47	6667
1882	398	1079	265	491	1290	68	818	2159	45	6108

The mortality from the local diseases was much higher than the average, the greatest increase being observed in apoplexy and paralysis, and in insanity. The deaths from pneumonia were 2932, or thirty-five less than in 1881.

The violent deaths were 898. The deaths from railroad accidents, 182, were more than ever before. The mortality from suicide, 162 deaths, remained very nearly stationary as compared with 1881. There were 12 deaths from homicide; 25 from the effects of heat; 26 from exposure; 60 from suffocation and strangulation; 6 from the effects of chloroform, and 2 from chloral; 5 from lightning; 107 persons were burned or scalded to death; 44 were fatally poisoned; 4 females died from starving, and 355 were drowned or lost at sea. A striking increase in the mortality from cancer and a decrease in pulmonary consumption are both probably in great measure due to the same cause, more accurate registration. The deaths from cancer were 987, of which 641, including 89 of cancer of the uterus, were of females. Of the 5865 deaths from pulmonary consumption more than one half were in persons between the ages of twenty and forty, representing for those ages 1302 deaths of males, and 1728 of females.

The report contains this year for the first time the statistics of divorces, which have increased from 1484 in the five years beginning with 1863 to 2650 in the five years ending in 1882. Of the 8610 divorces granted in the last twenty years 3148 were for adultery, 3660 for desertion, 696 for intoxication, 463 for extreme cruelty, 383 for cruel and abusive treatment, 190 for neglect to provide. The divorces on complaint of the wife were 67.9 per cent. of the total, and included all under the last-mentioned three heads, nine tenths of those for intoxication, two thirds of the divorces for desertion, and 1751 to 1397 for adultery.

PROVISION FOR THE CRIMINAL INSANE.

FROM time to time the JOURNAL has called the attention of its readers to this subject, and embraces the opportunity afforded by a hearing held last week before a joint special legislative committee, where it was considered for two days, of doing so again.

It is a matter of fact that there are now in Massachusetts lunatic hospitals no less than one hundred and fifty of the criminal insane, and according to Miss Barton, superintendent of the Sherborn Reformatory, there are twenty insane women in that institution. There is furthermore a very considerable number of insane convicts at the State Prison in Concord. The number of this class is becoming so large that on this account alone we can no longer hesitate to make an effort to adopt some form of special treatment for them.

Our laws provide for the transfer of all insane convicts to the lunatic hospitals, and the new hospital at Worcester was supposed to have wards especially adapted for their treatment. But what is actually the case? Although there are seventy of the criminal insane at the Worcester hospital, there are no special wards for their treatment (Dr. Parks stated at the hearing referred to above), all the wards being similar to those of other insane hospitals. And a large number of insane convicts remain in the prisons in spite of the laws allowing of their transfer. There must be some explanation of the latter state of affairs, as we have had evidence enough in times past that the prison authorities would gladly be relieved of their troublesome and dangerous insane, and we suppose it to be, at least in part, that the lunatic hospitals as at present organized are absolutely unable to manage the worst class of insane convicts.

It may be accepted then as conclusive, that we have a large number of the criminal insane in the institutions of this State. Those in the hospitals, we are told by all the superintendents, cannot be cared for in a manner suited to the other patients, the hospital organization, or themselves. Those in the State Prison and Reformatory can receive no adequate medical treatment and interfere with the discipline of the other prisoners.

What to do under all these circumstances was the question taken up by the legislative committee. On the first day of the hearing a plan favored by the Board of Health, Lunacy, and Charity was presented. This consisted in putting up a separate building on the prison grounds with a garden attached, to be under the charge, financially, of the warden, and medically, of the prison physician. This plan was opposed on the second day of the hearing by the chairman of the Board of Prison Commissioners and others.

Such an arrangement might involve less expense at the outset, but this advantage would be much more than offset by many disadvantages. As a department of the prison the asylum would of necessity be carried on on prison principles: for who could expect a warden to have any ideas as to the proper care of insane persons? And as the prison physician is usually un-

skilled in the treatment of mental diseases, and is a non-resident officer, dependent on his outside practice for the chief part of his support, he certainly would have neither the time nor training to enable him to properly organize an insane department. Furthermore, in our opinion, there is not room enough on the contracted prison grounds for a criminal lunatic asylum. The idea of the present day is not to shut the criminal insane up in a prison building within high walls, even if these walls inclose a garden. The very essence of the theory of separation is to remove them so far from any other class of criminals or lunatics that they will form a world by themselves, where no high walls will be necessary to hem them in, where they can live in an ordinarily built asylum, and benefit the State as well as their own health by labor on a good-sized farm.

The class of criminal insane is not by any means limited to insane male convicts. There are the female convicts, already alluded to, and furthermore, a large number of the unconvicted insane criminals, who have committed crimes wholly, or in part, as a result of insanity, and certainly should not be shut up within prison walls, and ostensibly classed as convicts, rather than lunatics. To pursue such a course would seem like returning to the old theory that insanity is an offense against society, rather than an unavoidable disease of a degenerated organ.

If we are to adopt a plan of separation, let it be the best one from the beginning. It will be sure to be cheaper in the end, as it will be for all time, instead of a temporary expedient. And let us above all things take no backward step in making a further classification of our unhappy and unfortunate fellow-beings, the insane. For it must not be forgotten that, in providing for them, we are performing a duty which is of interest to every citizen in the State who has had, or may have, a relative become insane.

MEDICAL NOTES.

—The number of medical examiners to be appointed by Governor-elect Robinson will be between fifty and sixty—not seventy-five as reported. The commission of about one third does not expire, but there may be a few resignations.

—The joint special committee appointed by the Legislature to consider during the recess certain matters pertaining to the charitable and reformatory institutions of the State is now giving hearings on the question of providing for the separate maintenance of the criminal insane.

—The Japanese anchor their temples against earthquake waves by attaching a heavy pendulum to the centre of the roof, the weight being only about a foot from the ground.

—It is reported that the young ladies of a somewhat famous female college of New England were alarmed at the universal and sudden prevalence of a diarrhœa of marked severity. Little moment, however, was attached to the incident by the authorities so long as the trouble was confined to the students, as they were sup-

posed to be suffering from the natural effects of over-indulgence in confectionery and the mild dissipations of female collegians. But the extension of the epidemic to those members of the Faculty who knew themselves to be without sin in that regard caused alarm. Investigation followed, and the fact was developed that the female practitioner to whom was intrusted the health of the institution had concluded, for some unknown reason, that the *primæ viæ* of the students needed clearing out, and had surreptitiously seasoned the apple sauce with rhubarb.

— At a meeting of the French Academy of Medicine, as reported in *Le Progrès Medical*, October 20th, a sketch was given by M. Marey of a case of congenital ectopia of the heart, in a female who had a bifid sternum and diaphragm with hernial protrusion. This anatomical peculiarity permitted the heart to be felt distinctly, just under the skin, and the aorta to be compressed through the fissure. The right ventricle was of course the most accessible to sight and touch. Except for a souffle of aortic stenosis the heart's action was normal. The appearance at first was as if the impulse were caused by the diastole of the ventricles, but it was soon shown to occur during systole. The graphic method of investigation showed the systole of the two ventricles to be synchronous, even when irregularities were produced in their rhythm. The investigations made upon this woman confirmed what has been observed in experiments by vivisection upon the higher mammalia. Thus obstacles introduced into the pulmonary or systemic circulation reacted in the same manner on the beat and modified its characteristics. The most important result from the observation of this case was to show that facts observed in the higher animals may be ascribed to the human subject as well.

— In Australia, where wild rabbits are a nuisance from their numbers and mischief, an ingenious veterinary surgeon has proposed to inoculate a number of these animals with tubercles, and to turn them loose with the hope of their infecting the others in their holes. But the plan is condemned by the popular press as inhuman, while medical minds are divided between the opposite views of the inadequacy of the means for destroying the rabbits at all, and of the danger of the tubercular infection going too far, or in other words acting like that other Australasian instrument, the boomerang, and returning upon its employers.

— Powdered cane sugar is described in the *Centralblatt für Chirurgie* as having been used with success by Professor Lücke as an antiseptic dressing for wounds. Here it was used in combination with naphthalin (equal parts), or in five parts of sugar to one of iodoform. It is applied under gauze in direct contact with the wound, and is left in place for eight to fourteen days before the sugar dissolves, the wound remaining clean and sweet. Another writer in the *Allgemeine medicinische Central-Zeitung* has used sugar alone as a dressing with equally good results, and considers it equal to iodoform as a dressing for small ulcers, though the sugar being aseptie rather than antiseptic, he prefers iodoform for chancres and for the fouler wounds and ulcers.

— It is said that among the recent improvements made at Guy's Hospital for the accommodation and convenience of students is the formation of a club and refreshment room which enables the industrious student to obtain a mid-day meal without going out to one of the dining and coffee houses in the neighborhood. The entrance fee is merely nominal, and the food cheaper and better served than that to be obtained elsewhere. Experience has shown that, so far from being a lounging room for the idle, those who frequent the club are industrious men, who desire to save the time lost in going outside the walls of the hospital. The club was opened last winter as an experiment, but its popularity has greatly increased, and a very large proportion of the students now avail themselves of its advantages.

— We have received the "Physician's Daily Pocket Record, comprising a visiting list, many useful memoranda, tables, etc.," arranged by Drs. S. W. Butler and D. G. Brinton, and published at the office of the Medical and Surgical Reporter. It is the eighteenth year of this very useful and well-arranged publication, and its career testifies of the usefulness which the profession has found in it.

Miscellany.

OBITUARY. DR. J. MARION SIMS.

DR. J. MARION SIMS, the brilliant and accomplished "father of gynecology," died suddenly of disease of the heart at his residence in New York on the morning of November 13th, in the seventy-first year of his age. On the day before his death he was in excellent spirits, and remarked that he had not felt so well for a year. In the evening he went out to see a troublesome case with his son, Dr. Harry Marion Sims, and on his return wrote for some time on an autobiography upon which he was engaged, and about half of which he had already completed. He did not retire until after midnight, but slept uneasily, and about three A. M. woke up and commenced to write in bed, as was his custom when wakeful during the night. After writing a few lines, however, he lay down again and apparently went to sleep; but his wife, noticing that his breathing became heavy and unnatural, endeavored to rouse him. Failing in this, she became alarmed and called her son; but the latter had scarcely entered the room when his father gave a gasp and expired. An autopsy, made by Drs. Peabody and Welsh, in the presence of Drs. Loomis, Wyeth, and Wylie, showed that death was due to atheroma of the coronary artery. Since an attack of pneumonia three years ago, from which he barely escaped with his life, Dr. Sims had been accustomed to spend his winters in the south of Europe, and, at the time of his death, he expected to sail with his family from New York on the 17th of the month.

Dr. Sims was born in Lancaster District, South Carolina, January 25, 1813, and was graduated from the South Carolina College, at Columbia, in 1832. He began the study of medicine at Charleston, but attended lectures at the Jefferson Medical College, in Philadelphia, where he received the degree of M. D. in 1835. He commenced the practice of his profession

in Montgomery, Ala., and soon won a considerable reputation for skill in the treatment of the diseases of women, as well as in general surgery. In 1835 he published a series of articles in the *American Journal of the Medical Sciences* on Trismus Nascentium in which he developed an original theory of the disease; and about the same time began his experiments in regard to the treatment of vesico-vaginal fistula. In order to carry these on satisfactorily he established a private hospital for women in Montgomery, and after four years of diligent application demonstrated the entire curability of this hitherto hopeless affection by means of the silver wire suture. Much of the success of this, as well as of his other gynecological operations, was due to the vaginal speculum, which he invented, and which alone would have made his name distinguished throughout the world.

In 1849 Dr. Sims's health broke down, and for several years his condition was such as to interfere most seriously with all professional work. In 1853, however, he removed to New York, where his health soon became reestablished, and with a reputation secured by his previous achievements which placed him far above all competitors in his special department, he entered upon a career of brilliant success in a field in which there was the widest scope for his distinguished abilities. To his efforts alone was due the establishment of the Woman's Hospital, and this admirable institution, so completely identified with the triumphs of American gynecology, will undoubtedly constitute one of the most enduring monuments which will preserve his name to future generations. In the face of many and almost insuperable obstacles, and with a zeal and enthusiasm which could not be daunted, he carried this great object through to its completion. The foundation of such an institution became a cherished idea to him during the days of his sickness, and as early as 1854 he got up a public meeting at which the project was started by the appointment of a committee to organize the hospital, of which the late Peter Cooper and Drs. Valentine Mott, John W. Francis, and Edward Delafield were members. In May, 1854, the institution was opened in a temporary building, with Dr. Sims as surgeon-in-chief. In 1857 a charter was granted by the State, and in the following year \$50,000 was appropriated by the Legislature for the hospital, after which the site on which the present buildings stand was presented together with an appropriation of \$10,000 by the city. The selection of a plan was left mainly to Dr. Sims, and before adopting any he went abroad and made a thorough study of hospital construction and management in the principal cities of Europe. The war, however, interfered with the carrying on of the work, and it was not until 1866 that the first pavilion was completed and ready for the reception of patients. Although receiving material aid from the state and city, it has been mainly by private contributions that the institution has been sustained from the beginning, and it has been principally due to the indefatigable efforts of its illustrious founder that these have been secured. At a special meeting of the Board of Governors of the hospital, held November 15th, a minute in regard to Dr. Sims was adopted which reads, in part, as follows: "From the day of its organization until his departure for Europe, in 1861, he was its only surgeon, and practically developed then the improved methods of operating which he had originated. . . . During thirty years of his active life he devoted his

talent, time, and influence to place this institution upon a successful basis." During his absence in Europe his position at the hospital was filled by Dr. Thomas Addis Emmet, and when, after his return, the Board of Surgeons was reorganized to consist of four members, he was appointed to one of the positions, the other three surgeons being Drs. Thomas, Peaslee, and Emmet. Several years ago the Board of Governors of the hospital made some rules involving certain restrictions in regard to operations, and believing that this was an unwarranted infringement upon the rights of the surgeons, Dr. Sims, with the impulsiveness which always characterized his actions, promptly tendered his resignation; since which time he has not been actively connected with the institution, although continuing a member of the committee of surgeons.

When he went to Europe, where he resided for the most part from 1862 to 1868, Dr. Sims met with a very flattering reception from the most distinguished members of the profession, and quickly added new laurels to his fame by his brilliant operations performed in the presence of the principal surgeons of England, France, and Belgium. He was made a Knight of the Legion of Honor by Napoleon III., and was also decorated by the Belgian, Spanish, Portuguese, and Italian governments, while he was elected Corresponding Fellow of various learned societies in London, Edinburgh, Brussels, Berlin, Christiana, and other foreign capitals. Being again in Europe in 1870, he was induced to take charge of the Anglo-American Ambulance Corps, and as its surgeon-in-chief won imperishable honors in the field, particularly at Sedan, where this was the first ambulance corps to arrive. In this work he was ably seconded by the distinguished English surgeon, Sir William MacCormac, who less than a month ago was Dr. Sims's guest at a brilliant entertainment given in his honor at the house of the latter in New York.

Among the principal of his literary works may be mentioned the following: Trismus Nascentium, Silver Sutures in Surgery, Clinical Notes on Uterine Surgery, Intra-uterine Fibroid Tumors, The Microscope in the Sterile Condition, A Treatise on Ovariectomy, and A History of the Discovery of Anæsthesia. The last-named monograph, in which he sought to prove that the use of ether was first discovered by Dr. Long, of South Carolina, involved him in a protracted discussion with various members of the profession, but he defended the claims of his friend with all his accustomed zeal and pertinacity. One of the honors of his life, of which Dr. Sims was most justly proud, was his selection as President of the American Medical Association in 1876, and the centennial address before the Association was delivered by him in Philadelphia on the 6th of June of that year, before a memorable audience. His kindness of heart, his uprightness of character, his geniality, his boundless generosity, and his personal magnetism, made him universally beloved and esteemed, and of scarcely any other American can it be said with equal truth, that he created a new era in medicine.

In December, 1836, Dr. Sims married the accomplished daughter of Dr. Bartlett Jones, of Lancaster, S. C., and his wife, two sons, and five daughters survive him. At the funeral services, which were held November 16th at the Madison Square Presbyterian Church, and which were attended by a vast concourse, a memorial sermon was preached by the Rev. Dr. Parkhurst, pastor of the church.

OBITUARY. DR. GEORGE J. ARNOLD.

GEORGE JEROME ARNOLD, eldest son of Hon. David Arnold, was born in Londonderry, Vt., May 28, 1835. He entered the Harvard Medical School in 1858, graduating in the spring of 1861, and commencing practice in Roxbury, Mass., a few months afterwards. In August, 1862, he was appointed assistant surgeon of the Twelfth Wisconsin Light Artillery with which he served seven months at the seat of war. Returning to Roxbury he acted for several years as physician to the Roxbury Dispensary and Almshouse, and also as surgeon to the Roxbury City Guards. About 1870 he became visiting physician to the Boston City Hospital, which position he held till 1881 when compelled to resign on account of ill health. In September, 1882, he relinquished practice altogether and removed to Wayland, hoping to restore his exhausted energies by a season of complete rest. He died at Old Orchard, Me., October 3, 1883, from the accidental discharge of a pistol which he was engaged in cleaning. By the explosion a wooden ramrod several inches in length was blown nearly through the abdomen, entering on the right side, and lodging beneath the skin near the crest of the left ilium, where it was cut down upon and removed. He died, how-

ever, on the second day following, from peritonitis. At the autopsy, besides the effects of the wound, the gall-bladder was found completely filled by a calculus the size of an English walnut, which had been the source of intolerable suffering during life.

Dr. Arnold was an indefatigable worker, and had at one time a large and lucrative practice. He was for a number of years treasurer of the Norfolk District Medical Society, and represented it repeatedly in the council. He was married May 28, 1861, to Miss Anna E. Bullard, of Wayland, and his domestic relations were known to have been exceptionally happy. His wife, with five children, the eldest now a student in Harvard College, all survive him.

OBITUARY. DR. MARSHALL S. MEAD.

DR. MARSHALL S. MEAD, for many years one of the most prominent physicians in Franklin County, died recently at his home in Northfield, Mass. He was born in Chesterfield, N. H., June 4, 1802. He practiced medicine in Northfield fully half a century, and was widely known and popular. He was a member of the Massachusetts Medical Society.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 10, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	521	169	20.35	17.66	3.65	4.61	7.10
Philadelphia.....	846,984	323	101	19.16	14.82	—	2.16	7.82
Brooklyn.....	566,689	218	70	19.78	15.18	4.14	.46	8.28
Chicago.....	503,304	182	74	24.20	8.80	2.20	3.85	10.45
Boston.....	362,535	151	50	25.74	19.14	3.30	4.62	9.90
St. Louis.....	350,522	133	50	32.25	10.50	4.50	5.25	12.75
Baltimore.....	332,190	134	48	32.56	15.54	3.70	6.66	7.58
Cincinnati.....	255,708	100	31	12.00	11.00	4.00	3.00	4.00
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	81	30	18.45	25.83	2.46	1.23	2.46
Pittsburg.....(1883)	175,000	51	23	25.48	9.80	1.96	9.80	7.84
Buffalo.....	155,137	64	23	12.36	9.36	6.24	—	1.56
Milwaukee.....	115,578	30	20	26.66	23.33	3.33	3.33	16.66
Providence.....(1883)	116,755	39	14	25.60	17.92	2.56	7.68	7.68
New Haven.....(1883)	73,000	29	5	20.70	20.70	—	10.35	3.45
Charleston.....	49,999	31	10	19.38	12.92	6.46	12.92	—
Nashville.....	43,461	13	3	15.38	15.38	7.69	—	—
Lowell.....	59,485	21	5	9.52	14.28	—	—	4.76
Worcester.....	58,295	17	6	17.64	11.76	5.88	—	5.88
Cambridge.....	52,740	22	5	9.09	18.18	—	—	4.54
Fall River.....	49,006	18	9	22.22	5.55	5.55	11.11	5.55
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	11	2	9.09	18.18	—	—	9.09
Springfield.....	33,340	10	3	20.00	—	—	—	—
Salem.....	27,598	6	0	—	33.33	—	—	—
New Bedford.....	26,875	8	0	12.50	25.00	—	12.50	—
Somerville.....	24,985	3	1	—	—	—	—	—
Holyoke.....	21,851	—	—	—	—	—	—	—
Chelsea.....	21,785	6	0	—	16.66	—	—	—
Taunton.....	21,213	6	2	16.66	—	—	16.66	—
Gloucester.....	19,329	7	2	14.28	28.56	—	—	—
Haverhill.....	18,475	4	1	—	—	—	—	—
Newton.....	16,995	2	0	—	—	—	—	—
Brockton.....	13,608	5	3	—	—	—	—	—
Newburyport.....	13,537	3	2	—	—	—	—	—
Fitchburg.....	12,405	5	0	—	—	—	—	—
Malden.....	12,017	3	1	—	—	—	—	—
Eighteen Massachusetts towns.....	130,196	45	10	6.66	33.33	4.44	2.22	—

Deaths reported 2302 (no report from New Orleans): under five years of age, 773: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 482, consumption 377, lung diseases 253, diphtheria and croup 183, typhoid fever 87, scarlet fever 62, malarial fevers 25, measles 17, puerperal fever 10, cerebro-spinal meningitis nine, whooping-cough nine, erysipelas seven, small-pox two, typhus fever one. From *scarlet fever*, Philadelphia 13, New York, Chicago, and Boston eight each, Brooklyn six, Baltimore five, St. Louis and Buffalo three each, Pittsburg and Providence two each, Milwaukee, Lowell, Worcester, and Gloucester one each. From *malarial fevers*, New York eight, St. Louis and Baltimore five each, Brooklyn four, Chicago two, New Haven one. From *measles*, District of Columbia eight, New York three, Baltimore two, Philadelphia, Brooklyn, Boston, and Providence one each. From *puerperal fever* St. Louis three, Philadelphia, Brooklyn, Chicago, Boston, New Haven, Nashville, and Cambridge one each. From *cerebro-spinal meningitis*, New York three, Springfield two, Philadelphia, Chicago, St. Louis, and Cincinnati one each. From *whooping-cough*, New York three, Brooklyn and District of Columbia two each, Chicago and Pittsburg one each. From *erysipelas*, Philadelphia two, Brooklyn, Chicago, Boston, St. Louis, and Baltimore, one each. From *small-pox*, Philadelphia two. From *typhus fever*, New York one.

Six cases of small-pox were reported in St. Louis; scarlet fever

35, diphtheria 33, typhoid fever 17, and measles six in Boston; diphtheria three and scarlet fever three in Milwaukee.

In the 32 cities and towns of Massachusetts, with an estimated population of 1,040,987 (estimated population of the State 1,922,530), the total death-rate for the week was 17.52 against 19.08 and 18.69 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending October 27th, the death-rate was 20.2. Deaths reported 3329: acute diseases of the respiratory organs (London) 291, scarlet fever 130, diarrhoea 114, fever 62, measles 58, whooping-cough 51, diphtheria 35, small-pox (London and Birmingham two each, Sunderland one) five. The death-rates ranged from 12.3 at Portsmouth to 28.8 at Salford; Leicester 14.5; Birmingham 15.9; Sheffield 18.9; London 19.1; Nottingham 19.4; Blackburn 21.6; Birkenhead 21.8; Liverpool 25.1; Leeds 26.3; Manchester 28.1. In Edinburgh 19.7; Glasgow 26.1; Dublin 24.9.

For the week ending October 27th, in the Swiss towns, there were 23 deaths from consumption, lung diseases 13, diarrhoeal diseases 18, diphtheria and croup three, whooping-cough two, typhoid fever two, measles one. The death-rates were, at Geneva 9.2; Zurich 4; Basle 15.1; Berne 20.3.

The meteorological record for the week ending November 10th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps:—

Date.		Barom-eter.	Thermome-ter.			Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
			Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.
Nov., 1883.																				
Sun.,	4	30.155	48	59	37	73	51	68	64	SW	W	W	9	8	8	O	F	C	—	—
Mon.,	5	30.287	52	65	34	82	39	89	70	W	SW	S	2	7	8	O	C	C	—	—
Tues.,	6	29.939	57	67	47	93	48	80	74	S	SW	W	11	16	9	O	O	C	—	—
Wed.,	7	29.961	44	56	33	59	48	50	52	NW	NW	NW	17	16	10	O	C	C	—	—
Thurs.,	8	30.011	41	51	31	78	68	72	73	NW	E	SW	8	8	4	F	C	C	—	—
Fri.,	9	29.765	54	59	43	87	96	87	90	O	S	SW	0	14	21	F	R	O	—	—
Sat.,	10	29.878	51	60	48	74	65	93	77	W	SW	W	5	4	4	O	O	O	—	—
Mean, the Week.		29.999	50	67	31				71										7.20	.48

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THREE WEEKS ENDING NOVEMBER 17, 1883.

EDGAR, J. M., assistant surgeon, from the Receiving Ship St. Louis, at League Island, Penn., to the Receiving Ship Wabash, at Boston, Mass.

AUSTIN, A. A., past assistant surgeon, to the Receiving Ship St. Louis, at League Island, Penn.

HALL, C. H. H., passed assistant surgeon. Ordered to the Naval Academy, Annapolis, Md.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 2, 1883, TO NOVEMBER 16, 1883.

BACHE, DALLAS, major and surgeon. Ordered to report in person to the commanding general, Department of the East, for assignment to duty. Paragraph 10, S. O. 259, A. G. O., November 12, 1883.

GARDINER, J. DE B. W., captain and assistant surgeon. Relieved from duty at Fort Huachuca, and assigned to duty as post surgeon at Fort Bowie, A. T. Paragraph 1, S. O. 104, Department of Arizona, November 8, 1883.

EGAN, PETER R., first lieutenant and assistant surgeon.

Upon being relieved from duty at Fort Bowie, A. T., to proceed without delay to Fort Huachuca, and report to the commanding officer at that post for duty. Paragraph 1, S. O. 104, Department of Arizona, November 8, 1883.

PRICE, CURTIS E., captain and assistant surgeon. Assigned to duty at Fort Custer, M. T. Paragraph 1, S. O. 187, Department of Dakota, October 25, 1883.

WILSON, GEORGE F., first lieutenant and assistant surgeon. Assigned to temporary duty at Fort Townsend, W. T. Paragraph 2, S. O. 149, Department of the Columbia, October 29, 1883.

APPOINTMENTS. HARVARD UNIVERSITY.—Dr. S. H. Durgin has been appointed Instructor in Hygiene, and Dr. Charles H. Williams Instructor in Ophthalmology.

BOOKS AND PAMPHLETS RECEIVED.—Students' Manual of the Diseases of the Nose and Throat. A Digest, descriptive of the more commonly seen Diseases of the Upper Air-tract, with the Methods of Treatment, by J. M. W. Kitchen, M. D., Assistant Surgeon to the Metropolitan Throat Hospital, etc. New York: G. P. Putnam's Sons. 1883.

Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States. For the Fiscal Year 1883. Washington: Government Printing Office, Treasury Department.

Original Articles.

ABDOMINAL TUMORS IN CHILDREN.
SIX CASES.

BY EDWARD N. WHITTIER, M. D.,

Physician to Out-Patients Massachusetts General Hospital, Instructor in Theory and Practice of Medicine Harvard University.

THE following series of cases involving the wide subject of abdominal tumors in children is presented simply as the history of the cases and their varying phases while under observation. The group may serve to illustrate the extreme difficulty of reaching conclusions sufficiently definite to be of great value while dealing with so floating a material as that composing an out-patient service, and to satisfy the reader, as the preparation of this paper has already satisfied your reporter, that with all of the best known methods freely placed at our disposal the diagnosis of such growths and accumulations must necessarily be involved in great obscurity.

CASE I. FÆCAL TUMOR OF UNKNOWN DURATION
OCCUPYING THE DESCENDING COLON.

From the mother, a thin, feeble woman, of highly nervous temperament, the following history was obtained:—

The child, a girl eight and a half years old, had never been particularly strong, was always delicate, had escaped the ordinary diseases of children excepting measles, but required great care and watchfulness, for she acted at times as if she was hysterical.

Since the child was a year and a half old there had been repeated attacks of "constipation." When first observed the mother said she would go a week if left to "nature," and that this condition had gradually grown into longer periods of constipation up to the present time. Yet it was only since second dentition was fully established that the complaint had assumed such formidable proportions, so that early last year she was three weeks without a defecation; last June she had been five weeks; and at Christmas was terminated six weeks' constipation. Closer questioning, however, developed the fact that since Christmas there had been the frequent escape of small quantities of fæces, and generally involuntary, obliging the child to wear napkins. The mother's anxiety lest her child should again become constipated led her to the hospital.

The girl, poorly nourished, not very intelligent, and excessively nervous, did not afford a satisfactory examination, her mother fearing that the child would have a fit, which she said an examination by the rectum always produced,—that even the use of a rectal injection often threw her into convulsions. Hence friction was advised, tincture nux vomica three times a day, and Hunyadi each morning, and relief was secured.

At the end of eight weeks the mother reappeared with the story of three weeks' constipation.

Examination of abdomen revealed the presence of a tumor occupying the left hypochondrium, lumbar, and inguinal regions, and extending nearly to umbilicus. This tumor proved to be a soft, non-elastic, non-fluctuating, but easily moulded mass, yielding to pressure, but not disappearing, and incommencing the child only by its increasing weight.

Because no other examination was allowed the mother was advised to enter the hospital for further advice

and treatment, but as she was not willing to comply with the hospital regulations she disappeared, and all traces of her were lost.

The accompanying diagram represents the size and position of the tumor at the time of my last examination.

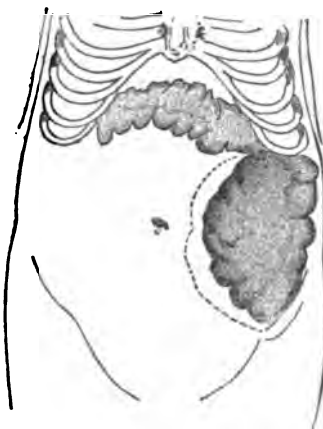


FIG. 1.

The difficulty of reaching any positive conclusion as to the cause of this fæcal accumulation is sufficiently evident. During even my superficial examination, required to map out the boundaries of the tumor, the child grew very hysterical, and was convulsed. I thought the mother would have a fit also. It was clear that nothing could be well done without ether, and that we could not obtain permission to use. Hence the diagnosis involved the following undetermined questions:—

Congenital malformation of large intestine.

Constriction of lower part of large intestine by a neoplasm.

Constriction by adhesions or bands of false membrane.

Paralysis of the muscular walls of the large intestine due to habitual constipation, and hysterical paresis.

Prolonged constipation has, as one of its most definite results, impairment of the peristaltic action of the large intestine; occasionally, and not infrequently, there is found hyper-extension, notably of the descending colon; at times a further obstacle to the passage of fæces is due to the fact that the intestine lying below the paralyzed portion becomes contracted, the contraction of inanition, and thereby increases the resistance offered to the passage of the accumulated fæcal mass. I therefore offer this as the most reasonable solution of the problem presented by this case.

The termination of the most prolonged period of constipation in this child was signalized by the frequent escape of small quantities of semi-liquid fæces; shorter periods had terminated by the sudden evacuation of large quantities of fæcal matter.

CASE II. PROBABLE SARCOMA OF RIGHT KIDNEY.

The patient, a girl of healthy parentage, was noticed by her mother, some seven months previous to my observation, to make complaint of pain and tenderness in her right side, and about the same time the mother discovered a small, hard lump in the right lumbar region. Various opinions were sought and received, but at last the child was brought to the hospital, and was turned over to me by Dr. Curtis.

The mother assigned the child's complaint to an injury received while playing with her other children on a swinging gate early in the summer; other than this no cause remote or proximate could be ascertained, and the rapid growth of the tumor in the month of November led her to the hospital.

The child was a thin, pale, distressed-looking girl, extremely weak, with no variation from the normal condition of the thoracic organs save some upward displacement. The abdominal walls, thin and wasted, were distended in the right lumbar region notably by a dense mass, quite regular in general outline, but

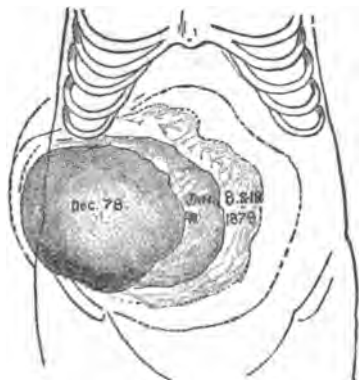


FIG. 2.

nodular over the anterior surface nearest the umbilicus; this mass was firm and resisting, easily displaced upwards, forwards, and inwards by the hand placed in the region of the right kidney. The circumference of the abdomen was then eighteen inches, and the tumor extended to the umbilicus, occupying the right lumbar region and part of the right inguinal and right hypochondrium of same side. Two weeks later the tumor had pushed across the umbilical region, and in a little more than a month from the time of the first observation and record the mass filled nearly the whole abdominal cavity, the child emaciating very rapidly, yet gaining six inches in abdominal circumference.

The child died of exhaustion. No autopsy was granted.

CASE III. CYSTIC DEGENERATION OF RIGHT KIDNEY.

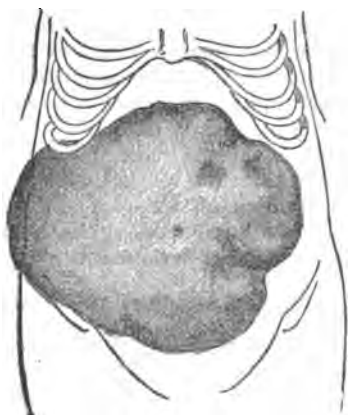


FIG. 3.

By Dr. S. Cabot's permission I am able to present the following case from the records of the hospital:—

The patient, a sickly-looking child, was very much

emaciated. The parents state that four months previous to entrance, and when about a year old, it was noticed to have enlargement of abdomen; this increased very rapidly; at the end of the fourth month it had extended across the median line about two inches. Some time later than this I first saw it. The tumor, irregular in outline and in surface, occupied nearly the whole abdominal cavity; was dull, dense, and resisting, and at points giving a very indistinct sense of fluctuation. Intestinal resonance even in modified form could be made out only in the left hypochondrium and left inguinal regions.

The accompanying diagram represents the size and position of the tumor.

Early in December Dr. Cabot aspirated the tumor and secured a small quantity (half ounce) of bloody fluid. This seemed to be contained in several small cysts, and was obtained by pushing the needle in various directions.

Dr. Fitz reported on the fluid as follows: "I found nothing with the microscope to indicate the source of the fluid sent me. Red blood corpuscles, fat drops; rare cholesterine crystals and fatty degenerated cells were found; the latter were either flat or round, and might have come from the peritoneal wall as well as elsewhere."

When nineteen months old the child died, and this note of the autopsy was sent to the hospital:—

"An immense collection of cysts originating in right kidney; in fact that organ was converted into a cystic tumor; the whole weighing seven and three fourths pounds. All the other abdominal organs healthy. Death hastened by a slight attack of bronchitis. The tumor did not begin to tell upon the health of the child until about six weeks before death. The cysts contained nothing but clear serum."

The physician in charge at the time of the child's death sent a report of the case to the JOURNAL for publication.

CASE IV. CYST OCCUPYING THE RIGHT HALF OF THE ABDOMINAL CAVITY. CONGENITAL; PROBABLY HYDRONEPHROSIS OF RIGHT KIDNEY.

E. S., female infant, was brought to the hospital when five and a half months old, with the following history: At birth, the breech presenting, the child was extracted, but without much difficulty, and was noticed to have a misshapen belly. The attending physician said that the muscles on the left side of the neck were undeveloped, in consequence of which the head was turned for some time to one side, and the left foot was in position of valgus. There was also a malformation of the hard palate.

At the time of my first observation, the mother, an intelligent young woman, complained for her child chiefly on account of the great and increasing swelling of the belly, and the child's consequent distress, which required the constant use of opiates. The child was carefully examined, with the following result: The palatal portion of the superior maxilla had united at a very acute angle, and on either side near the alveolar processes a strongly marked ridge or buttress had been thrown out, nearly masking the view of the hard palate.

The left foot was but little distorted, but the abdominal walls were greatly distended by a tumor occupying the right half of the abdominal cavity, displacing the liver upwards and the small intestine to the left side.

The tumor was a uniformly rounded body, with a slight constriction in lower and anterior boundary, giving a very indistinct fluctuation, and movable upwards and inwards on pressure exerted from behind.

The accompanying diagram represents as nearly as may be the size and position of the tumor :—

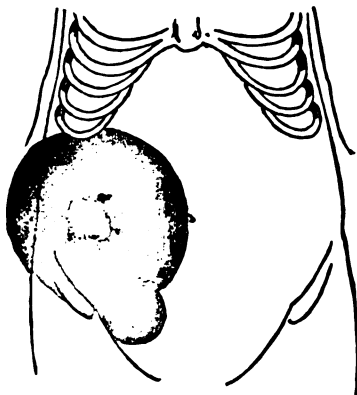


FIG. 4.

The child was sent to the hospital and entered the service of Dr. Minot, who kindly assented to an exploratory puncture with hypodermic needle. This gave a clear neutral fluid containing albumen.

On the following day Dr. Minot aspirated the cyst, removing thirty-eight fluid ounces, to the entire relief of the patient. Dr. Hill's very complete analysis of the fluid is as follows :—

Slightly turbid when received.

Reaction neutral.

Specific gravity, 1000.

Sediment vibrios, few blood corpuscles and round cells :—

Total solid residue	1.165 per cent.
Water	98.835 per cent.

100.000 per cent.

Of the 1.165 per cent. solid residue there was —

Of organic and volatile residue	0.798 per cent.
Inorganic residue	0.367 per cent.

1.165 per cent.

Of the 0.798 per cent. organic and volatile residue there was —

Fat	0.028 per cent.
Urea	0.073 per cent.
Albumen	0.323 per cent.

0.424 per cent.

The only variety of albumen present was serum albumen. No cholesterine present.

The remainder of the organic and volatile residue was probably chiefly derived from the decomposition of inorganic substances upon ignition.

Nine weeks later Dr. Ellis aspirated, obtaining twenty-six ounces of similar fluid, and on the 10th inst., an interval of eleven weeks, I drew off fourteen ounces.

The report of the analysis of the fluid, while more complete than any to which I have been able to obtain access, does not throw much additional light on its source. The fluids of cystic kidneys are quite likely, however, to be without distinguishing characteristics. But the history of the growth, its position, its contents, and the attempt at malformations elsewhere are to be regarded as important factors, enabling us to reach a conclusion that the cyst had its origin in the kidney, and was dependent upon a malformation in the course of the ureter or at its point of union with the bladder.

An additional element of much interest was described by the mother at the time of her last visit. That at times after very considerable increase in the size of the tumor, and great distress on the part of her child, there would be a noticeable diminution in size, and relief to the child, corresponding to that seen after aspirating.

This condition suggests very forcibly that the obstruction is essentially valvular, and that the case is of that class in which the most satisfactory explanation is that of a mechanical obstruction yielding to an increasing pressure.

CASE V. CYST OF UNKNOWN ORIGIN OCCUPYING THE GREATER PART OF THE ABDOMINAL CAVITY. ONE AND A HALF YEARS' DURATION.

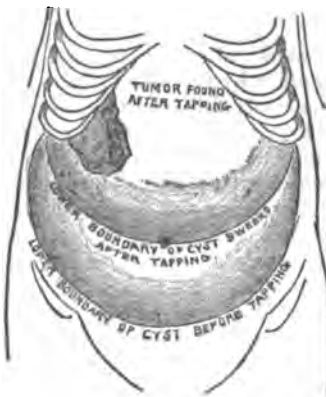


FIG. 5.

A healthy boy, two and a half years of age, had been perfectly well save an attack of "croup" a year or more ago, and that during last summer he had diarrhoea, and was very weak for a long time afterwards.

When he was about a year old he was noticed to have some abdominal enlargement, and this had been progressive up to the date of his coming to the hospital, where I first saw him and advised his admission.

There had been at no time, so far as could be learned from his mother, a rather intelligent woman, anything like an acute inflammatory disturbance of a kind more marked than the diarrhoea of last summer. No symptoms referable to the abdomen other than those of size and weight. Never jaundice nor evidence of the "dropsies" of any other part of the body. No cough; no dyspnoea; no swelling of feet or hands. The urine on examination proved to be normal; there were no cardiac and no pulmonary complications. In every respect save that of great abdominal enlargement the child was well formed and well nourished.

The patient entered the Massachusetts General Hospital and the service of Dr. Minot, by whose permission I am able to give the accompanying report of the case while under observation there :—

"A child of healthy aspect, with an abdomen greatly distended and fusiform, fluctuating and dull on percussion everywhere. Anterior wall completely covered with a net-work of distended veins. No swelling of hands or feet. Some puffiness of eyelids."

January 28th Dr. Minot tapped and drew off sixty-two fluid ounces of a dark brown color, loaded with cholesterine. The following is Dr. Hill's report of the character of the fluid :—

Color, brown.
Specific gravity 1016.

Reaction slightly alkaline.	
Solids	4.28 per cent.
Water	95.72 per cent.
	100.00 per cent.
Serum albumen	2.95 per cent.
Inorganic salts790 per cent.
Urea052 per cent.
Blood pigment fat and dry residue of sediment	1.488 per cent.
	4.280 per cent.
Sediment — Cholesteroline.	
Blood globules.	
Granular corpuscles.	

After the tapping there was found under the free margin of the liver a round, apparently solid mass, projecting downwards to within a short distance of the umbilicus.

Some nine weeks after the tapping the child was brought to my office by the mother, who expressed the fear that he was again filling up. An examination revealed the fact that the abdominal enlargement was again increasing, but in a way very different from that expected; it was from above downwards; a soft fluctuating tumor displacing the liver and chest walls upwards and outwards, and having its lower boundary in the central line nearly or quite opposite the umbilicus.

Under the margin of the ribs in the hepatic region could still be felt the solid resisting mass found after the tapping. No other variations were observed. I have endeavored in my diagram to figure the position of the tumors on the different dates, and have marked them, as shown by my examinations.

I regret to state that I have been utterly unable to find any explanation of this condition of things which seems to me to offer a satisfactory solution of the problem, and it is only by reason of the second examination that I have had any right to reach the conclusion that we had to deal in this case with an encysted fluid, limited by walls less in extent than the peritonæum.

My earlier impressions were that the illness of last summer was complicated with peritonitis, and that the fluid was not very different from that which is occasionally seen in the rare form described as chronic diffuse peritonitis.

CASE VI. ABDOMINAL CYST; CENTRAL; UNILOCULAR; OF UNKNOWN DURATION.

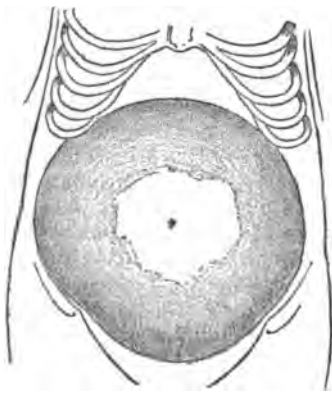


FIG. 6.

L. H., four years old, was noticed by his mother, two years previous to my first examination, to have some abdominal enlargement. But little importance was at-

tached to this at the time, and but little notice was taken of it until the mother was obliged by his complaints to lengthen his waistbands, and a more careful examination showed a marked fullness in the lower part of the bowels; this increasing, a physician was consulted, and the "dropsy" was treated in the usual manner, without the sometimes so-called good results. The boy grew larger, steadily increasing in size from below upwards, and without any symptom of local or constitutional disturbance other than that growing out of the increasing weight. There was no swelling of any other part of the body. No cough; no dyspnoea; in fact, no disturbance save that directly traceable to the increasing weight and distention referable to the abdominal enlargement, and by reason of this the child was brought to the hospital for treatment.

In every respect save that of a greatly distended abdomen the child was in excellent condition. The thoracic organs were displaced upwards, but uniformly. Hepatic and stomachic regions were similarly changed in position. No marked enlargement of abdominal veins. The abdomen was distended fully and uniformly, giving very indistinctly the wave movement on palpation; this was thought to be due to the extreme degree of tension of the abdominal walls until by percussion it was determined that as change of position gave no change in note, and that as intestinal resonance, first detected in the right and left hypochondria, grew more marked until in the epigastric region it was fully developed, where deep pressure gave the upper boundaries of a round, smooth body, there were the limiting walls of what seemed to be an extremely tense cyst. This was the conclusion also reached after consultation with Dr. Ellis, and aspiration was determined upon, and a few days later I drew off eighty-eight ounces of a dark-brown fluid, crowded with cholesteroline, of which the following analysis, carefully made by Mr. Peckham, Professor Wood's assistant at the time, deserves better record than I can give it:—

Color, dark brown.	
Specific gravity, 1021.	
Reaction, neutral.	
Sediment, large, and consisting of cholesteroline and old partially decomposed blood corpuscles. The dark-brown coloring matter was due to hæmatin.	
No sugar.	
Ether extractive matter consisting of	
fat and cholesteroline	1.71-125 per cent.
The amount of dry albumen	5.64 per cent.
Amount of solids after ignition	1.36 per cent.
The amount of urea00153 per cent.
The solids after ignition consisted of sodium, potassium, and magnesium and calcium combined, combined with hydrochloric, sulphuric, and phosphoric acid.	

No reaction followed the operation. Succeeding examination only revealed in the hypogastric region the collapsing walls of the cyst. Six months after the operation all trace even of this was entirely lost, and when last heard from, a couple of weeks ago, the child was pronounced by his mother to be "as well as any one's boy."

— The *Lancet* completed its sixtieth year on October 5th. The first article in its first issue was a lecture by Sir Astley Cooper, delivered at St. Thomas's Hospital.

A NEGLECTED FIELD OF MEDICAL SUPERVISION.¹

BY C. B. SHUTE, M. D., MALDEN.

AFTER hearing the quotations from the eminent authorities which we have given, and comparing their conclusions with the results of our every-day experience, we feel that we can safely affirm that dipsomania should be considered a form of insanity, and therefore in common with all other diseases it should claim the attention of the physician in order that the condition of the victims of this fearful evil may if possible be ameliorated.

We therefore ask the practical question: What can the medical profession do for these unfortunates in the way of treatment? The obstacle here presents itself that the patient is unwilling or unable to take the first step in the treatment of disease, namely, that of removing the cause of the disease. As we have remarked before, rarely will either the patient or his family ask for our advice. Whatever then we have to offer him must be forced upon him. The employment of drugs is well nigh useless. No known drug can successfully counteract or destroy the slavish habit. We have but one remedy at our disposal, but that fortunately promises to be a most efficient one, namely, isolation in some appropriate asylum for a prolonged period. Forcibly removed from an evil which these patients are of themselves unable to avoid, we may hope to secure some grand results. Minds, which were directed only in one channel towards the gratification of a debasing appetite, may, when the impossibility of satisfying that appetite is seen, confidently be expected to begin to develop in some different direction under a proper course of discipline.

In some instances dipsomaniacs have been sent to insane asylums, where they may enjoy the rest and effect the abstinence that may be required. But it is obvious that unless the means of classification of the inmates are greater than is usually the case, the ordinary insane asylum is not an appropriate place of confinement for the class of persons under consideration. The most favorable plan in dealing with the evil in question, and the one which I wish to advocate in this paper, is that of establishments expressly designed for the reception and treatment of inebriates. This plan for the treatment and cure of dipsomania is not by any means a new one. Twenty-five years ago it was earnestly discussed and ably advocated in the Medico-Chirurgical Society of Edinburgh by such men as Skae, Christison, and Peddie. Dr. Peddie read a paper before the Society on The Necessity for Some Legalized Arrangements for the Treatment of Dipsomania. He contended that, while it was impossible to come to any strict definitions on the subject, all persons laboring under not merely mental aberration but moral perversions which interfered with public safety and well-being, or under that form of cerebral disease known as dipsomania, who, having not that self-control which virtually made them responsible agents, were yet amenable to law if they fell into crime, should, for the best interest of society and their own, be subjected to restraint in an asylum and be detained there not merely till the paroxysm of excitement should have passed away, but for such a time as gave hope of a permanent restoration to sound mind and social habits, and to a state of capability to discharge social duties

as hospitals for the insane, namely, that of retaining and exercise civil rights. He recommended: (1.) Separate institutions, distinct from ordinary lunatic asylums, under the management of public boards. (2.) These boards should be composed of a magistrate, a justice of the peace, a clergyman, and a physician. (3.) Appeals, in cases of complaint in treatment or undue detention, should be made to the Home Secretary, or to a Lunacy Commission. (4.) Applications for treatment might be voluntarily made by dipsomaniacs; for compulsory restraint, they should be made by friends or relatives, or, in exaggerated cases, by the sheriff. (5.) That all applications for compulsory restraint should be made through the sheriff, setting forth, among other things, that for so long a period the dipsomaniac had suffered from the disease, that all ordinary means of cure had proved unavailing, and that all power of self-control was gone. (6.) That the principal statements of the petitions should be attested by two witnesses, one of whom should be the medical attendant, and the other a physician to be appointed by the sheriff. He expressed the belief that such a scheme might be carried out at very little expense to the public — for the institution might be made nearly self-supporting, and that any extra expense incurred would be more than saved in lessening the number of those who, for want of timely interposition, ended their days in poor-houses, prisons, or in lunatic asylums, as incurably insane.

In 1872 Dr. Mitchell, Commissioner of Lunacy for Scotland, urged the establishment of asylums for dipsomaniacs before the Committee of the House of Commons. He says that his experience in Scotland is far from encouraging, but the experiment has never fairly been made, and, in his opinion, if it were tried under special legislation, we might reasonably expect good results. There should be tentative legislation, such as would give us the opportunity to acquire the experience we need. At the same time there are certain safeguards that would be required. The legislation might lead to abuse, and this abuse it would be necessary to guard against. It should not be left entirely to medical men to settle this, as it is not entirely a medical matter. There should be something of the nature of an inquest and, so far as Scotland is concerned, he thinks the order of a sheriff should always be necessary to authorize the detention of a drunkard, and that the duration of that detention should be fixed in the order. There should always be a way of prolonging the detention in certain cases, and likewise a channel of appeal for cases of undue detention. He advocates that persons should be received voluntarily into such institutions, but should not be allowed to leave sooner than a fixed time; also that the asylums should be of two kinds, one for paying, and the other for non-paying, patients; also that some might be established for those who entered voluntarily, and others for those who entered involuntarily. These views of Dr. Mitchell were ably seconded by Dr. Clouston, the editor of the *Journal of Mental Science*.

In the *Scotsman* for January, 1877, a sort of permissive legislation is urged, whereby such institutions should be placed under state supervision and control, Parliament being asked to do nothing more than sanction the compulsory detention of persons found after legal inquest to be in a condition requiring treatment in an inebriate asylum.

These institutions labor under the same difficulty

¹ Concluded from page 487.

ing their cases sufficiently long to make a permanent impression. Even the most of those who consent to become patients have no idea of prolonging their seclusion after the immediate effects of indulgence have disappeared. They say that they feel perfectly well, have not the slightest desire for drink, and, therefore, that further seclusion would be not only unnecessary but prejudicial to their mental and bodily health. Thus beguiled by a morbid confidence in themselves, they determine to reassume their liberty, in spite of entreaty and argument, and the institution has no power to prevent it, unless authorized so to do by the laws. But, as Dr. Peddie well remarks, it is the name of liberty, and not the thing, which presents difficulty in proper legislation on the subject. He considers that it is the duty of a good government to interfere in such cases, when all self-control is gone, and so much personal and relative interest is at stake. Already the laws do much to guard against the squandering of property by such persons. Why should they not do something for the personal welfare of the individual himself?

In England some progress has already been made in this direction. The Habitual Drunkards' Act, which came into force January 1, 1880, was enacted to enable habitual drunkards to surrender their liberty for a period not exceeding twelve months, that they might secure for themselves the conditions most favorable to a cure. But this act is very defective. As a man has to confess himself an habitual drunkard before two magistrates, it proves a barrier to applicants for admission to a "Retreat," as it is styled. However, the medical profession in England are doing their best, under the imperfect law, and the "Dalrymple Home for Inebriates Association" has been registered, this body including in its membership such men as Drs. Duckworth, Alfred Carpenter, and Norman Kerr.

In America, with the exception of a few States, progress in the treatment of dipsomania has not been as satisfactory even as in Great Britain. To Dr. Benjamin Rush, of Philadelphia, belongs the honor of first elaborating the subject and outlining what has been accepted nearly a century later. In 1790 he described the disease of inebriety, and urged that it should be treated in a hospital devoted to this purpose. Fifty years later in our own State Dr. Woodward, of Worcester, maintained that inebriety was a disease and curable as other diseases in asylums. He remarks, "If there are 30,000 drunkards in this country, and one tenth part are susceptible of cure, it will afford adequate motive to commence immediately the important work of establishing asylums for the inebriate. Doubtless one half may be cured and the habit be wholly removed, if proper means are persisted in for a suitable length of time."

More recently Dr. Earle, of our own State Society, states that his experience in the treatment of dipsomania "convinces him that there is little hope of recovery so long as there is no legal authority for the detention of its subjects for a much longer period than they will voluntarily remain under restraint."

Dr. Austin Flint, Sr., President of the American Medical Association, in speaking of the treatment of this disease, says: "The successful management is rarely practicable except by means of institutions in which the patient is under the same restrictions as in insane asylums."

Dr. N. S. Davis, of Chicago, asserts as "the conclusion of a long life of observation and study concerning this subject that nothing less than a protracted isolation will afford any fair prospect of recovery in dipsomania. For chronic or persistent inebriates he advocates the establishment of asylums, which should be maintained under State or municipal authority. Admission to these should be through legal process, with legal authority to detain for such a length of time as will insure thorough renovation and recovery, this term being not less than one nor more than five years, unless sooner discharged for good conduct and full recovery by the superintendent in charge of the institution. Such a system would place the legal relations and personal liberty of the confirmed inebriate on the same level with the insane, with institutions specially adapted to effect his reformation, and at the same time protect his friends, family, and the whole community from the depredations and crimes so constantly being committed by the class to which he belongs."

Several medical societies have passed resolutions urging that institutions of this character be established, and in a few States, notably in New York, Connecticut, Maryland, Minnesota, and California, laws have already been enacted, by which the inebriate can be committed and legally detained. New York and Maryland have State institutions, but in most cases private corporations have charge of asylums of this nature, and the treatment is not always in the hands of those approved by the medical profession.

In 1876 the mayor of Boston appointed a committee of three, consisting of Rev. Dr. A. A. Miner, Dr. Geo. C. Shattuck, and Dr. John E. Tyler, to examine and report on the treatment of drunkenness in the city institutions, and to suggest some measures looking to the reform of this class. In their report the committee condemn the method of dealing with drunkards which is common in all our large cities, by which men are fined in some small amount or sent to a work-house or penitentiary for some short period, commonly thirty days. If the fine is paid the burden falls upon the family or friends of the drunkard, who are innocent of all fault, and are punished by the mere fact of his drunkenness. If he is sent to prison, the term of his confinement is long enough for him to get sober, but not long enough for him to acquire habits of sobriety. The consequence is that a restoration to liberty is followed by a new spree and another commitment. The Commissioners suggest that the city of Boston should convert the institution at Deer Island into a sort of reformatory, where all kinds of agriculture and mechanical labor can be carried on. Thither drunkards should be sent for terms long enough to enable their constitutions to recover thoroughly from the effects of alcohol, and to give them an opportunity to acquire habits of industry. In some cases a year would be long enough for this purpose; in others three years might be required. They believe that there would be enough of punishment involved in the reformatory process to make it thoroughly salutary.

In Massachusetts there are no State inebriate institutions, there are no laws whatever encouraging or governing the proper treatment of this unfortunate class. We have had laws restricting and laws licensing the sale of alcoholic liquors, with modifications almost without number, and all with indifferent success in their execution, so that now the community seems to

be in a condition of honest doubt as to which law is the better, or whether any law on the subject is good. The great obstacle to the successful execution of these laws lies in a fact, which many philanthropists are too blinded by prejudice to perceive, and many legislators too ignorant to comprehend, namely, that no distinction is made between intemperance the disease and intemperance the vice. While intemperance the disease remains untreated, or not properly treated, it is probable that all laws regulating the sale of liquors will prove, for the most part, ineffective. Legislators and philanthropists alike seem to be destined to grope about in darkness in their futile efforts to improve the race so far as this evil is concerned, until the medical profession asserts its prerogative, and claims its important share of the labor. It is certainly an opprobrium to our profession that it has so long remained in the background, and shown such a reluctance and disinclination to take steps towards the amelioration of the victims of inebriety.

I have brought forward this subject before this District Society because prominently in the past it has shown itself a progressive Society, and has been among the foremost of our District Societies to enlist in any needed medical reform. I have, therefore, the hope that after mature reflection and consideration of the facts placed before them the members of this Society may deem it advisable that through the State Society a movement be made for securing State legislation on this important subject.

In closing, perhaps I cannot better formulate the needs of this unfortunate class of persons, and at the same time indicate in a concise form the duties of the medical profession in relation to the subjects of this disease, than by quoting the Resolution concerning Inebriates passed by the Association of Medical Superintendents of American Institutions for the Insane:—

Resolved, That in the opinion of the Association of Medical Superintendents of American Institutions for the Insane it is the duty of each of the United States, and of each of the Provinces of the Dominion, to establish and maintain a State or public institution for the custody and treatment of inebriates, on substantially the same footing in respect to organization and support as that upon which the generality of State and Provincial institutions for the insane are organized and supported.

Resolved, That as, in the opinion of this Association, any system of management of institutions for inebriates, under which the duration of the residence of their inmates, and the character of the treatment to which they are subjected, is voluntary on their part, must in most cases prove entirely futile, if not worse than useless, there should be in every State and Province such positive constitutional provisions and statutory enactments as will in every case of presumed inebriety secure a careful inquisition into the question of drunkenness and fitness for the restraint and treatment of an institution for inebriates, and such a manner and length of restraint as will render total abstinence from alcoholic or other hurtful stimulants, during such treatment, absolutely certain, and present the best prospects of cure or reform, of which each case is susceptible.

Resolved, Further, that the treatment in institutions for the insane of dipsomaniacs or persons whose only obvious mental disorder is the excessive use of alcoholic or other stimulants, and the immediate effects of such excess, is exceedingly prejudicial to the welfare

of those inmates for whose benefit such institutions are established and maintained, and should be discontinued just as soon as other separate provision can be made for the inebriates.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

ON THE PATHOLOGY OF DIPHTHERIA.

KLEBS¹ has made a communication upon this subject in which he considers that there are two forms of the disease that are to be sharply differentiated, both by the character of their course and the nature of the parasites which occur in them.

The first form, apparently restricted to the eastern lands of Europe, is marked by the relatively slight extension of the fibrinous exudation on the tonsils and pharynx. On the other hand severe constitutional disturbances leading to death within a few days appear very early. The micro-organisms found appear as clumps of brown-colored micrococci mixed in three layers of fibrine, also as small rod-shaped bodies placed perpendicularly to its surface. In the brain and cord, where extensive hæmorrhages have taken place, the same rods occur in the sheaths of the vessels. The pia and the gray substance are the chief seat. The severe brain symptoms and the paralysis seen in cases where recovery has taken place may be the result of such destruction of nervous tissue.

The second form occurs in Western Europe. In this the local appearances are more prominent, in some cases presenting the characteristics of what was formerly considered as tracheal croup, the contagious nature of which is now but rarely denied. The first changes are noticed on the tonsils, and from these the pharynx and trachea are quickly invaded. The initial fever is only of moderate degree, and lasts as a rule only so long as the formation of the false membrane on the mucosa progresses. On the other hand relapse as well as severe septic complications are not infrequent. Nervous symptoms fail or are seen only relatively seldom as secondary phenomena. Albuminuria occurs early, and death results either from mechanical obstruction to the respiration or from septic or interstitial inflammatory processes.

An exceedingly small bacillus is the constant accompaniment of this form. It first develops in groups in the epithelium of the mucous membrane. An enormous dilatation of the blood-vessels is associated with this as a secondary change. This leads to stasis of the blood. Immediately there follows a fibrinous exudation, and the epithelium with its adherent bacilli is raised up. These organisms form a continuous layer on the surface of the membrane, and only penetrate gradually into its interior. The stomach is rarely affected, nor has the parasite been detected in the internal organs even in those places where an interstitial process has been developed.

The possibility, of course, must be conceded that such are the effect of a chemical irritant produced by the organisms growing on the surface. On the other hand, perhaps, better methods of demonstration will furnish proof of the presence of the micro-organism in the blood-vessels, these not being colored by methyl blue or gentian that give beautiful pictures in the su-

¹ Allgem. medicin. Central-Zeitung, 13, October, 1883.

perficil layers. The bacilli are very minute, scarcely attaining the size of those found in tubercles. They usually contain two spores at the end of the rods, but on drying four or six are often to be distinguished.

The secondary result, which is attended with danger to life, is the extension of the membranous formation into the trachea. Hæmorrhagic conditions are frequently met with in the lungs, gastric mucous membrane, and subcutaneous fat tissue. These usually present themselves as irregularly banded, dark-red patches, seen on the cut surface of the organs.

With the hæmorrhage into the lungs inflammation is associated as a firm, red hepatization, accidentally joined with interstitial formation. These foci are found preferable at the lowest parts of the lungs, and seem to depend upon a paralysis of the vessels. A fibrinous exudation into the alveoli of the lungs may be associated at times with this condition of the vessels, may occasionally take on the character of a bronchial croup.

The extravasations into the subcutaneous fat are usually in the extremities, and present themselves as faded bluish spots, the diameter of which rarely exceeds one centimetre.

In the stomach where they are found they are small and very numerous, and limited to the mucosa proper.

In the territories supplied by the paralyzed vessels an interstitial deposit of cells takes place. This has been noticed in the muscular substance of the heart, in the nerves, and in the kidneys. In these latter organs, even in cases where there was marked albuminuria, such a development of cells was apt to be only slight, while a hæmorrhagic condition, such as usually occurs in acute nephritis, failed utterly. In the septic complications causing death by quick collapse there was found in the urine, together with albumen, great numbers of small, round, movable micrococci, which have been observed by Heuter and Tommasi in the blood of patients suffering from diphtheria, and described as monads.

ANATOMICAL INVESTIGATIONS ON INFLAMMATION OF THE KIDNEY AND MORBUS BRIGHTII.

Dunin¹ endeavors to explain the cause of Bright's disease and its relation to nephritis in general. There are two general questions which he considers must be answered first in order to approach the subject intelligently.

(1.) Are all forms of nephritis one and the same malady?

(2.) Where is the starting-point of Bright's disease; is it to be sought in degeneration of the epithelium or in the vessels or connective tissue?

In answering the first question attention is to be directed at first to the chronic forms. These have been divided into two classes: (1) the so-called white kidney (nephritis parenchymatosa); (2) the granular kidney (nephritis interstitialis). A third form, the small white kidney, is considered as furnishing an intermediate stage between these two both in clinical and anatomical relations.

His own studies have led him to the conclusions already reached by Weigert, that the histological changes in all forms of Bright's disease are always of the same character, and that it is only their combination which differs. These changes are (1) swelling, destruction, and proliferation (?) of the epithelium; (2) infiltration and new formation of connective tissue; (3) degener-

ation of the glomeruli; (4) thickening of the vascular walls. Even the amyloid kidney forms no exception to this, as in it all these appearances have been seen, and the amyloid degeneration is simply added to this.

Such the author considers are the common phenomena of Bright's disease, and he then takes up some of the various forms of nephritis to see if they correspond or not.

First, the forms which follow the acute infectious diseases. All authors are agreed that that which follows scarlet fever is to be regarded as a typical form of acute Bright's, and is to be placed in the closest relation to it. Of the other contagious diseases the kidneys of recurrent typhus are often to be placed in the same category, while those of typhus abdominalis are seldom so associated.

In regard to the identity of all nephritis and Bright's disease: A comparison is made between the large kidney with rather a finely granular look, which is related to the kidney of chronic passive congestion, and the so-called granular kidney of Bright's disease. The clinical picture is found to be different, and in the first case the microscope shows destruction of the epithelium, collapse of the tubules, and an insignificant hyperplasia of the connective tissue. According to him the lesions are brought about in the following manner: The epithelium is first attacked in consequence of an insufficient supply of blood (venous stasis, atheroma of the arteries, old age). This slowly proceeds, and the cells are floated off by the water, the lumen of the tubes remain patent for a time, and then finally the walls collapse. In this way an apparent increase of connective tissue results. The vessels become dilated, and the organ presents the appearance of an angioma. In this there is no evidence of an inflammatory action, and therefore it must evidently be excluded from the class of Bright's disease.

In Bright's disease, on the contrary, he considers that all the structural constituents of the kidney are affected at the same time, and it should justly be called a "diffuse nephritis."

Since it is of this nature it is inflammatory, and its commencement is to be sought in changes in the vessels followed by an emigration of white blood corpuscles into the glomeruli, the tubules, and the interstitial spaces. But how does the epithelium behave in all this? As is well known, its degeneration is constant, but in the greater number of cases this is retrogressive, and is to be referred to the same causal working that lies at the foundation of the inflammation; but, on the other hand, it is more frequently to be regarded as resulting from disturbed nutrition. So long as the whole process is confined to the disturbed nutrition of the epithelium simply there can be no talk of Bright's disease, and it is only when the addition of inflammatory disturbances of the vessels has taken place that true Bright's can be said to have developed.

ON CHANGES IN THE CORD AFTER POISONING WITH ARSENIC, LEAD, AND MERCURY.

So little has been done in the histological investigation of the changes in the spinal cord after poisoning with the above substances that Popow² has been induced to study the subject experimentally. Already it had been noticed that arsenic affected the cord, while different theories have been advanced to explain the paralysis following lead-poisoning, one considering

¹ Virchow's Archiv, Bd. xciii., s. 286.

² Virchow's Archiv, vol. xciii., p. 351.

it to be of central origin, while another located the lesion in the peripheral nerves and in the muscles. Quicksilver, on the other hand, has received but little attention in this connection.

His experiments were made chiefly upon dogs, and the first series with white arsenic. The doses were regulated so that the animals lived from four hours to seven months. The results showed that the alteration first begins in the vessels, but the nerve elements of the gray substance soon participate. In this way an acute central myelitis speedily develops, which has been designated by Webb under the name of *polio-myelitis acuta*. From its slight vascularity the white substance only takes part in the later stages, and then the picture is that of an acute diffuse myelitis. All parts of the columns are equally affected, and there seems never to be any localization.

With lead the following was a general summary of the results obtained after poisoning from seven to twenty-six days: The type of the affection was that of a general central myelitis, the most marked changes being in the parenchyma. In its further development the white substance was involved, and here the nerve fibres as well as the connective tissue stroma was implicated. In the peripheral nerves no such appearances were met as have been described by Gombault under the name of a "neurite peri-axiale." The author, however, does not deny the possibility of the occurrence of this as a later secondary symptom. He thinks that the nervous symptoms of lead-poisoning, that is, the cramps, anæsthesia, etc., can be explained by the loss of the nervous elements in the cord, and cannot be referred in any way to the peripheral nerves, the more so as the inflammatory action so quickly causes the destruction of the ganglion cells of all the groups of the gray substance.

In experiments with mercury the chloride was the preparation employed, and the animals lived from four to forty-five days. The cord presented the same general characteristics as when arsenic or lead had been employed; at first changes were to be seen only in the gray substances, then in the white columns, while the peripheral nerves remained wholly unaffected.

His results are formulated as follows:—

- (1.) Arsenic, lead, and mercury call forth marked changes in the cord which must be regarded of the character of an acute central myelitis.
- (2.) In relatively prolonged cases this is not restricted to the gray substance, but invades the white, and thus presents the picture of a diffuse myelitis.
- (3.) The peripheral nerves remain entirely unaltered under the quick action of the poison.
- (4.) The clinical symptoms find a ready explanation for what has been described above, while not one of them can be explained by an affection of the peripheral nerves.

A DISEASE OF THE SYMPATHETIC PLEXUS OF THE INTESTINE.

Blasko¹ has examined the intestines from seventy autopsies, and in two cases has found a highly characteristic change in the nerves and ganglia of the wall.

The first case was one of anæmia following childbirth, and dependent largely upon poor hygienic conditions. This became progressive, persistent vomiting came on, and coma closed the scene. At the post-mortem examination there was found fatty degeneration of the heart. The wall of the entire intestinal tract

was thin, apparently from atrophy of all the coats. Under the microscope the number of the papillæ was seen to be diminished; they were narrower than normal, and contained a brownish-black pigment at the summit. The stomach was normal.

This extreme atrophy aroused the suspicion that an alteration in the nerves was at the bottom of it, and they were examined in the following manner: Pieces of the gut were placed in a twenty-five per cent. solution of pyroligneous acid for from three to four days, when the investigations were commenced. After eight days the tissue has swollen all it could, and could then be left in the acid without fear of further change. Sections were made longitudinally and transversely through the thickness, or superficially from the surface. In this way lasting preparations could not be obtained, but if these were desired the specimen must first be hardened in a watery solution of picric acid and afterwards treated as before.

With a low power even, the ganglia and nerve fibres of both Auerbach's and Meissner's plexus, as well as the anastomosing branches, were seen to be in a condition of fatty degeneration. The ganglion cells of Meissner's plexus, which are rarely single, but usually associated together in large groups, presented the most varied pictures, from the commencement of fatty metamorphosis to the complete formation of fat drops. A medium degree was the usual condition.

The cells of this plexus are round or ellipsoidal, while their walls have a peculiar highly refractive property. The presence of fat masks this in a degree, but still they are always easy to find. The cells of Auerbach's plexus are not so easily distinguished, as they are flat, more or less polygonal plates with numerous projections placed between the circular and longitudinal layers of muscular fibres. The fatty degeneration was decidedly not so far advanced as in the cells of the other plexus. Corresponding to this the muscular fibres were also found to be fatty degenerated.

In the nerve fibres the degeneration differs according as they are medullated or not. The first sort are met with only occasionally, while the latter are in great abundance. The result, however, is the same, and when this has taken place the distinction between the two classes is lost.

This admits of an easy explanation, as it is immaterial whether the fat which is present has been formed at the expense of nerve protoplasm or of the medulla. In separate broad bands the presence of strongly refracting scales aroused the suspicion that such were remnants of nerve medulla, and therefore that such fibres belonged to that class. Among the non-medullated the picture varied according to their breadth and arrangement. The greater number of isolated branches, the ending of which was difficult to follow, were only indicated by continuous rows of fat drops, and by the cells lying in their nodal points.

The broad bands usually being in twos or threes present ordinarily a clear wall, while here and there is seen a nucleus of the sheath or the remains of an axis cylinder.

The degeneration occupied the entire thickness of the walls as far as the nervous structures were visible. The branches entering from without were the least affected, so that the disease appeared to be confined to the structures properly lying within the wall of the intestine.

The second case occurred in a woman who entered the hospital with a history of delirium tremens, and at

¹ Virchow's Archiv, Bd. xciii.

the end of the sixth day died from pneumonia. The autopsy showed, besides the hepatization of the right lower lobe, numerous fresh broncho-pneumonic foci in the oedematous tissue of three other lobes. There was also hyperæmia of the brain, chronic gastric catarrh, fatty infiltrated liver with cyanosis of all the abdominal organs. The intestinal wall was thinner than normal, but presented no marked alteration to the unaided eye. The microscopic examination showed an extreme fatty degeneration of both plexuses, even more pronounced than in the first case.

The fibres of Meissner's plexus appeared like tubes filled with fat drops resembling so closely distended chyle vessels that only their peculiar manner of branching, as well as their connection with ganglion cells, gave indication of their nervous nature. The atrophy of the mucosa was well marked, but there was an absence of pigmentation of the tips of the papillæ.

Auerbach's plexus was more gravely implicated than in the first case, and corresponding to this was the fatty degeneration of the muscular coats.

In neither case were the vessels altered.

The question to be decided is whether the affection of the nerves is primary or secondary. The probability speaks for the former. Our faulty knowledge of the function of these networks prevents a full appreciation of the value of variation from the normal type. The idea at present accepted is that we have to do with a reflex circle within the intestine itself, in which Meissner's plexus would represent the posterior cornua, and the ganglia of Auerbach's plexus the motor cells of the anterior cornua. Such an idea would be supported by the peculiar varied forms of both kinds of ganglion cells, as well as from the fact that the number of nerve fibres arising within the intestine itself is very much greater than the number of fibres coming into it from without. Thus the intestine has its own nervous system, and the external fibres are to be considered simply as regulatory.

In the intestines which came from the other autopsies no changes were found in the walls. Pigment granules were found quite constantly and in great abundance in the ganglion cells of both plexuses. These are not, however, to be regarded of pathological importance, but rather as analogous to what have been found in the cerebral ganglion cells. Further a small accumulation of fat drops is of quite frequent occurrence, and never entirely absent except in young people. These drops are much fewer than the granules which arise from degeneration, and are to be regarded rather in the light of a fatty infiltration.

R. Meier has found in the intestines of rabbits and guinea-pigs, which had been fed for a long time upon lead, a disease of the small intestine and vascular apparatus with changes in Meissner's and Auerbach's plexuses not unlike those depicted here. He mentions a sclerotic degeneration, which progressed with the development of fibrous tissue, and also seems to have found a sort of fatty degeneration of the ganglia and of the fibres of the respective networks implicated.

The first case recorded by Blasko is of clinical interest as one of a pure cachexia caused by atrophy of the intestine, and simulating in symptoms an ulcer of the stomach. Leukæmia and previous anæmia were excluded by examination of the blood and bone marrow. Absorption could only take place through the stomach, and this led to extreme weakness and anæmia, which finally ended fatally.

Reports of Societies.

ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THE eleventh annual meeting of the American Public Health Association was held at Detroit, November 13th, 14th, and 15th, DR. EZRA M. HUNT, of New Jersey, presiding. There was the usual attendance from various parts of the country, and quite a number of new names, among them several of Boston physicians, were added to the list of membership. Many State Boards of Health were represented by their secretaries or by delegates. The morning of the first day, after the transaction of routine business, was devoted to the reading and discussion of a paper by D. E. SALMON, D. V. S., of the Department of Agriculture, Washington, D. C., on

TEXAS CATTLE FEVER,

in which he dwelt at length upon the history of the disease from the time when first noted to the present day, its nature, and the methods of treatment.

It is epizootic in nature, contagious as to members of the same herd, and rapid in its progress. The spleen, kidneys, and liver are invariably enlarged, and the bladder filled with bloody urine. The Texas cattle upon their native ranges are invariably afflicted with it, and their introduction to Western and Northern markets is causing it to be known at most stock-yards. Yellow fever is regarded as a terribly fatal disease, but it is not half so fatal as this cattle fever. Texas cattle carry the contagion to foreign pastures, even as ships carry yellow fever to foreign countries, though no case ever occurred on board. Cattle carry the disease germs in their hair, in the stomach, and the alimentary canal. If our Northern cattle are to be saved from contagion, a barrier must be erected against Texas cattle.

A paper on

HOG CHOLERA,

by DR. J. M. PARTRIDGE, South Bend, Ind., followed, in which the writer took the ground that as cholera or yellow fever prevails most in densely populated districts or in cities, so this disease has prevailed almost exclusively in the corn and pork producing regions of the Northwest; and that not on account of any climatic or inherent local causes, but because of an abundance of material on which it may be fed and developed. It may prevail at any season of the year, and while it is more contagious and fatal in summer, it is by no means exterminated or suppressed by the frosts of winter. A multitude of post-mortem examinations have revealed, in all cases, essentially the same morbid processes or pathological conditions. The seat of disease is not restricted to any organ or set of organs, but may be found in the lungs, heart, liver, spleen; in all mucous membranes, especially the intestines. In all cases the lungs and lymphatic glands are affected and generally the intestines.

A paper by DR. W. T. BELFIELD, of Chicago, on Swellhead, Actinomycosis, in Texas Cattle, was also read.

At the afternoon session the

ETIOLOGY OF MALARIA

was the subject of papers by DR. G. M. STERNBERG and DR. A. A. WOODHULL, of the United States Army, both advocating the decomposition of vegeta-

ble substance as the true cause of malaria. In the discussion which ensued, Drs. BELL, of New York, ROR, of Maryland, REGAN, of Texas, and CHARLES SMART, of the National Board of Health, took part. No new light was thrown on this much vexed question.

Dr. Sterberg expressed himself unwilling to admit as proved the existence of a bacillus malarie.

The evening was devoted to addresses of welcome by State and city officials, to a long address by the President of the Association, reviewing the past history of the Association, and the present and future prospects of sanitary science. At the conclusion of the addresses the meeting adjourned to a reception and supper at the Russell House.

SECOND DAY'S PROCEEDINGS.

After the election of more new members, the subject of

MALARIA

was again taken up, papers bearing upon it being read for Drs. WEBB, of Alabama, PENN, of Tennessee, and WOOD, of North Carolina; the discussion was renewed by COL. G. E. WARING, of Rhode Island, who said, among other things, that he believes there is no connection between the Potomac marshes, soon to be filled up, and the malaria which prevails at Washington. On the contrary, he is satisfied that the malaria germs come from a swamp that was filled up some years ago. It was not drained, and the water lies there stagnant beneath the earth that was filled in. Consequently he expects an increase of malaria in Washington after the Potomac marshes shall have been filled.

DR. GUSTAVE DEVRON, of New Orleans, said that city was situated near a swamp, but is afflicted with more malarial fevers when the swamps are dry than when they are filled with water. Consequently he is satisfied that the drying up of swamp water liberates malaria germs.

DR. O. W. WIGHT thought the subject of ground water is one that should receive close attention. Drainage is, to a certain degree, a preventive of malarious diseases. As the earth dries out malaria decreases. In draining a swamp there may be an increase of malaria, but when the drainage is complete, and the earth becomes dried, there is a decrease in the disease.

Several other members took part in this discussion.

The rest of the morning session and the first part of the afternoon were taken up by a consideration of the questions of Food Supply and Adulteration of Food.

Papers on Yellow Fever and School Hygiene by Drs. HARGIS, of Pensacola, and LUNDY, of Detroit, consumed the afternoon. Dr. Lundy's paper, directed against the well-known hygienic abuses in schools, aroused some little discussion. The evening was occupied by papers on Physical Training and Physical Culture, by Drs. WATSON, of New Jersey, and D. A. SARGENT, of the Harvard Gymnasium, and by a paper on State Boards of Health, by Dr. REEVES, of the West Virginia Board.

THIRD DAY'S PROCEEDINGS. RESOLUTIONS AND REPORTS.

A resolution was adopted urging legislation by Congress at its coming session, looking to the prevention of the introduction of yellow fever, cholera, and other scourges into our Southern ports, and recommending a suitable annual appropriation to assist the National Board of Health in gathering statistics bearing upon

malarious and infectious diseases, and for a reenactment of the law of 1879, under which the introduction of pestilential diseases from foreign ports was prevented.

Another resolution was adopted asking for the appropriation by Congress of a suitable sum for the Medical Library, and for the Army Medical Museum at Washington.

Reports of the Committees on Vital Statistics and on Vaccination were submitted. The latter report, read by Dr. Abbott, of Massachusetts, opposed the largely prevailing idea that diseases are transmitted by inoculation by vaccine virus, and favored compulsory vaccination as being the only means for eradicating small-pox.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year:—

President, Albert L. Gihon, Washington. First Vice-President, James E. Reeves, Wheeling, W. Va. Second Vice-President, Erastus Brooks, New York. Secretary, Irving A. Watson, Concord, N. H. Treasurer, J. B. Lindsley, Nashville, Tenn. Executive Committee, Thomas L. Neal, Dayton, Ohio; J. D. Gatch, Indiana; H. P. Walcott, Massachusetts; Gustave Devron, Louisiana; Chas. Smart, U. S. A.; H. D. Fraser, South Carolina.

The rest of the morning session passed in the reading of a long report by Rudolf Hering, C. E., on the Removal of Decomposable Material from Households, and a paper by Dr. Oldright, of Ontario, on the Overhead Ventilation of Sewers.

At the afternoon session delegates were appointed to the International Medical and Sanitary Congresses at Copenhagen and The Hague in 1884: R. C. Kedzie and O. W. Wight, Michigan; Stephen Smith, New York; Azel Ames, Jr., Massachusetts; W. K. Newton and Ezra M. Hunt, New Jersey; J. T. Link, Indiana; George E. Waring, Washington.

Questions of drainage and sewerage took up the rest of the session. Dr. Raymond, of Brooklyn, sent a paper on House Sanitation; Dr. Van Bibber, of Maryland, one on Drainage of Level Lands; Dr. Ross, of Kentucky, a paper on Dangers of Fæcal Matters Disseminating Disease; Dr. De Wolf, of Chicago, one on Pullman from a State Medicine Point of View; Dr. Montgomery, of Chicago, on Modern Sanitation. Papers were also submitted by Dr. James, of New York, on Typhus Fever; by Dr. Morris, of Maryland, on Catarrhus Baltimoriensis; Dr. McCormack, of Kentucky, on Restriction of Small-Pox; by Dr. Ferguson, of Detroit, on Preventable Contagious Diseases. It will be seen that there is no lack of material for the next volume of the Association's Transactions; but the reading of so many papers prevented a full discussion of any of them. It was suggested that Cremation be a subject of discussion at the next meeting in 1884.

At the evening session, after an address by Bishop Thompson, of Mississippi, on Sane Humanity, Dr. Pratt, of Michigan, read a very long paper on The Increase of Insanity in the United States, its Causes and Sources.

At the close of the reading of Dr. Pratt's paper, after some little discussion, a resolution was adopted by a vote of thirty to one expressing the sense of the Association that legislation should be taken by Congress at its next session to put a stop to the coming to this country of the foreign criminal and pauper classes and those with an insane heredity, and, on mo-

tion, the rules were suspended for the purpose of taking immediate action upon the resolution.

The Association then adjourned to meet in St. Louis a year hence.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

DECEMBER 9, 1882.

PSEUDO-MEMBRANOUS ENTERITIS.

DR. BOARDMAN stated that since his report of cases at a previous meeting of the Society, illustrating the common association of this affection with hysteria, he had met with still another case, which would serve to confirm the opinion then expressed that this pseudo-membranous discharge occurs only in hysterical subjects. This last patient, immediately after her marriage, about ten months ago, consulted a physician for the relief of backache and some trivial symptoms. She was informed that a displacement of the uterus existed, and a pessary was inserted. Finding no relief she consulted Dr. Boardman, who, upon examination, found a Hodge pessary, upside down, within the vagina, while the uterus was in excellent position, and nothing abnormal could be detected except the discharge mentioned, and some anæmia and debility. Inquiry elicited the undoubted history of hysteria, which had existed, more or less, since puberty. It is probable that the ovarian and general pelvic congestion, induced by the stimulation of the sexual functions, incident to recent marriage, was the cause of the renewal of the hysterical condition, which in this case had been in abeyance for some time before marriage.

At about the same time Dr. Boardman saw another patient who presented some obscure nervous symptoms, for which she had been treated by Dr. Denny. During the period in which these symptoms had existed she had expelled per vaginam, at each catamenial period and about twelve hours after the commencement of the discharge, a menstrual decidua, each time in two pieces. (The last specimen, of two portions, sufficient together to cover nearly the entire internal surface of the uterus, was exhibited to the Society.) It had occurred to Dr. Boardman that there might be a common origin of these two affections, but he did not recollect that they had occurred coincidentally in any of his patients. In this last case it should be stated that though the membranous pieces were considerably larger than those commonly met with, yet they were expelled with very little pain, thus suggesting the more proper term, a menstrual decidua rather than a dysmenorrhœal membrane. Nothing abnormal was found in the pelvic regions except, perhaps, an undue sensitiveness in the region of the left ovary; and it may be remarked in this connection that one theory of the origin of this affection is that it arises in an ovarian irritation which is transferred to the uterus and gives rise to this peculiar product.

DR. GOSS said that the false membrane had been discharged from the vagina and generative organs, as well as from the bowels, in one of the four cases which he had reported to the Boston Society for Medical Improvement. All were females, and not hysterical, although suffering from nervous debility. According to statistics the disease was mostly in females, but these not always hysterical.

DR. WELLINGTON mentioned the case of a young man to whom he had been called frequently, both night and day, for six or eight months, and who always had all sorts of pains and aches without obvious cause, a condition of things which, occurring in a woman, would have been called hysteria. The case passed into other hands, and Dr. Wellington learned from the attending physician that the patient, then under his care, had the pseudo-membranous disease of the intestine.

ON SUDDEN DEATH FROM THE ENTRANCE OF AIR INTO THE UTERINE VEINS.

Paper by DR. DRAPER.¹

DR. CHEEVER said that he had often been struck by the fact that air-embolism never seems to take place in ordinary surgical accidents, as cut-throat, although cellular emphysema is common in them. In badly lacerated wounds it was common to find about the knees and thighs the cellular tissue full of air; but he had never seen or heard of death from air-embolism in these cases. There was a well-known caution against this accident in regard to operations on the neck, where the large veins may be wounded while they are on the stretch, and Dr. Cheever had seen one or two instances of slight ingress of air, accompanied by a characteristic gurgling sound, resulting in gasping and a temporary interruption of the heart's action.

DR. GANNETT remarked that Dr. Draper had covered all the important points. He thought the greatest danger to the woman, the other conditions for air-embolism being present, was when she assumed the knee-elbow position, the falling forward of the abdominal contents tending to produce a negative pressure in the uterine veins.

DR. BAKER thought it rather surprising that more cases did not occur when we consider that a quite frequent method practiced by abortionists is that of the injection of air into the uterus. He had been told by a patient that she had used a Ferguson's speculum and an ordinary uterine syringe, and, by the aid of a hand-mirror, had been able to pass the nozzle of the syringe into the cervical canal, and had thus injected air into the uterus; that she had done this three times, and that on the fourth occasion, having allowed the pregnancy to continue longer than usual, she had done herself some harm by the operation. Another surprising thing was that the accident had not occurred often during the treatment of the uterus by applications of such things as impure carbolic acid, iodine, etc., even up to the third month. This had occurred to him as the most reasonable explanation of a sudden death which had occurred about four years ago in a neighboring town. The patient had been placed on the table for the removal of a sloughing fibroid. She had taken the ether very well, and the removal had been the work of but a few moments and without the slightest difficulty. The pretty broad pedicle was cut with scissors with almost no hæmorrhage. The finger was then carried into the uterus, and a second fibroid was found, of the size of a Florida orange, easily separable at the lower part, a case where enucleation seemed to present no difficulties, but scarcely was this process begun when the patient suddenly died. Dr. Baker had stripped up the fibroid for the space of about two inches in diameter. The person in charge

¹ Published in the Boston Medical and Surgical Journal, vol. cviii., pp. 3 and 28.

of the ether was an exceedingly careful and skillful man, and another assistant was present. Every attempt was made to resuscitate the patient,—hypodermic injections of brandy and of ether, nitrite of amyl, electricity, artificial respiration. Unfortunately there was no autopsy, but the most reasonable theory of the cause of death was that above stated.

DR. FIFIELD said that we had all been acquainted for years with some of the phenomena of air-embolism. In a case under the care of Dr. John C. Warren, who was operating upon a tumor of the neck, the surgeon heard the rush of air and saw his patient die. In the case of a tumor of the neck, and whose removal is followed by the entrance of air, it is said that the various fasciæ of the neck act somewhat as do the uterine sinuses. When a student at Paris at the *École pratique* Dr. Fifield heard Dumarquay advertise that he would lecture upon and demonstrate the fatal effect of the entrance of air into the veins. A large Newfoundland dog was exhibited, the jugular vein was exposed, and air was blown into its cavity. Churning of air and blood in the heart (*bruit de chemin de fer*) ensued, but the dog burst his bonds and fled precipitously home. A second dog was brought in, the jugular was inflated with great force, by a tall Scotchman, a volunteer from the audience, evidently used to the pipes. Same *bruit de chemin de fer*, as Dumarquay enthusiastically remarked. With a yell of triumph over the theories of science, the beast bounded from the table, and followed his brother down the street. Air in the jugulars had given new strength.

Dr. Fifield said it seemed to him that in Dr. Draper's cases some other element must have come into play. In the famous case of Gilson, at Plymouth, a catheter was connected with the pipe of a syringe, and an injection of air was made through the catheter into the uterine cavity. The woman died instantly. The autopsy proved the presence of air in the veins. But in the cases described by Dr. Draper, if the truth had been actually told, it was not simply in connection with the introduction of the instrument, but there must have been some absolutely rude method of introduction. Dr. Cheever had alluded to the presence of air in the tissues in the case of compound fractures; it occurred also from puncture of the wall of the chest, simulating emphysema resulting from wound of the lung by fractured rib. Some operations on the bladder and rectum had been followed by emphysema, but to his knowledge none of these cases had been accompanied by air-embolism. Why should this be an appanage of operations on the womb or its outgrowths?

DR. CHEEVER referred to a case, somewhat complicated as to the cause of the embolism, of a tumor supposed to be ovarian, but probably fibro-cystic, of the uterus. The patient was etherized, and the vagina and uterus explored by the hand only, not with violence, but still with some force, the other hand manipulating the abdomen. The finger was passed a short distance into the os and about the cervix into the cul-de-sac. Immediately following this manoeuvre the aspirating needle was put into the abdomen, where the fluid was thought to be; no fluid came. The phenomena of air-embolism then ensued; the patient became pale and livid; the respiration labored, and death very shortly followed. The first question was in regard to the ether; the tongue was drawn forward and artificial respiration vigorously performed, but this only hastened the result by mechanically sucking more air

into the heart. At the autopsy, made by Dr. Draper, all the phenomena of air-embolism, which he has described in his paper, were manifest. Air escaped at the primary incision, and was found in the heart, and traced downward to the pelvic cavity and into the uterus itself. The uterus was enlarged, and showed large, patent sinuses. The introduction of air was supposed to have been occasioned by the vaginal examination, not by the introduction of the aspirator, since a perfect vacuum had been made in Poitier's bottle, and subsequent trials proved the instrument to be in good order, and that the pumping of air into the tissues through the needle was impossible. It was Dr. Cheever's impression that there was some slight indication of lesion of the mucous membrane by violence, at the cervix, where the finger was passed. The uterus was pretty large, embracing the tumor, and had thickened walls. In so young, strong, and healthy a woman the death was very unexpected and appalling.

DR. DRAPER remarked concerning the case just reported by Dr. Cheever that the uterine wall outside the tumor was very much thinned, while the sinuses were unusually developed, but where the air entered, near the left cornu, the tumor had been separated somewhat, and there was some reddening of the part by infiltrated blood. There was an area of distinct solution of continuity of the size of a quarter of a dollar between the tumor and the uterine wall, which could not have been made by the finger, and must have been occasioned by the other part of the manipulation.

DR. BOARDMAN referred to an article in *Virchow's Archiv* in which is related a fatal case from the entrance of air into the veins in the immediate vicinity of a gastric ulcer. The fatal effect was brought about usually, in the conclusions of the writer, by interference with the action of the valves on the right side of the heart. It was a curious fact that in some of the experiments made air injected under a certain pressure into the vein of one leg made its appearance in the corresponding vein of the opposite extremity.

DR. DRAPER stated that cases are reported where the air has been found in parts of the systemic circulation remote from its point of entrance, so that it must have gone through the pulmonary circulation.

DR. C. ELLERY STEDMAN exhibited a drawing of an instrument once the property of an abortionist, which had come into the hands of the late Dr. C. C. Holmes. It consisted of a sharp, pierced metallic catheter, to which an air-bag was attached.

NEW YORK ACADEMY OF MEDICINE.¹

MEETING of November 15th, *continued*.

The paper of the evening was read by DR. FRANCIS DELAFIELD, on

TYPHOID FEVER IN NEW YORK.

After alluding to the fact that all who were engaged in practicing in New York at the present time felt an interest in the study of typhoid fever, on account of the constantly increasing number of cases which had been met with during the past year, and after showing that statistics, although dry, were sometimes wholesome and necessary, Dr. Delafield proceeded to mention some figures in reference to the number of deaths from the disease occurring in the city during the past few

¹ Concluded from page 497.

years. For some years prior to 1863 the yearly mortality averaged from 100 to 200 cases. Between 1863 and 1866, when typhus fever prevailed in New York, the yearly mortality ran up to from 500 to 600, and since then the average number of deaths per year had been from 200 to 400. In 1879 there were 178 deaths; in 1881, 446; and in 1883, up to October 1st, 274 deaths. In New York, as in most other places, the disease was most prevalent during the months of August, September, and October; though no month of the year was exempt from it.

From January 1, 1878, to October 1, 1883, there were treated in the hospitals of New York 1305 cases of typhoid fever, and in these different years there was a variation not only in the whole number of cases but also in the mortality. In 1878 there were 124 cases, with twenty-seven per cent. mortality; in 1879, 114 cases with twenty per cent. mortality; in 1880, 110 cases, with thirty per cent. mortality; in 1881, 319 cases, with twenty-two per cent. mortality; in 1882, 313 cases, with twenty-three per cent. mortality; and in 1883, up to October 1st, 190 cases, with a mortality of twenty-six per cent. From this it would be seen that the greatest relative number of deaths occurred in 1880, and the smallest in 1879.

In noting the age of the patients treated it was necessary to take into consideration the fact that in the various hospitals referred to the population, as a rule, consisted entirely of adults. The ages were as follows:—

From 5 to 10 years	49 cases.
From 10 to 20 years	336 cases.
From 20 to 30 years	604 cases.
From 30 to 40 years	186 cases.
From 40 to 50 years	77 cases.
From 50 to 60 years	16 cases.
From 60 to 70 years	2 cases.
Over 70 years of age	4 cases.

The ordinary rule of typhoid, of preferring young adults, was, therefore, observed in these cases; by far the largest number occurring in patients between twenty and thirty years of age.

After alluding to the difficulty of stating with certainty anything in regard to the ætiology, especially as many of the cases originated outside of the city, Dr. Delafield proceeded to speak of the pathological changes observed at the autopsies recorded. The regular intestinal lesions of typhoid were present; the changes, even in the worst cases, being confined to the agminated and solitary glands. Perforation occurred in only a small number of cases, and in two of these it was through the walls of the vermiform appendix. The colon was involved in only a few instances. The mesenteric glands were swollen in all the cases; but suppuration of these glands was found in only two cases. The spleen was soft in all cases. It was sometimes enlarged, sometimes of normal size, and sometimes smaller than normal. In a single instance (the patient being a boy of eight years) the spleen was ruptured, and there was a large extravasation of blood into the peritoneal cavity. The liver in many cases was enlarged, and the kidneys also often exhibited swelling with degeneration of the epithelial cells. In such cases there was sometimes albumen in the urine during life, and sometimes not. The lungs exhibited a variety of changes. Severe bronchitis and broncho-pneumonia existed in only a few cases, and lobar pneumonia was found in two cases. Hypostatic congestion of the posterior part of the lungs was very common; but extreme hypostatic

congestion was seldom met with. Granular and waxy degeneration of the voluntary muscles of the abdomen were seen in only a very few cases, and in the majority of cases the heart was firm, with unaltered muscular structure. It was evident, therefore, that the anatomical type of the disease was not a severe one; neither the characteristic or the accessory lesions being more than fairly marked.

The study of the symptoms Dr. Delafield had made from 102 undoubted cases of typhoid fever treated at the hospitals during the past five years. A distinct prodromic period was noted in only eighteen cases. This varied very greatly in duration, but the symptoms (of which bronchitis was quite frequently one) were much the same in all. The character of the invasion was ascertained in eighty-three cases. In thirty-seven a chill occurred on the first day; sometimes mild and sometimes severe. This was sometimes repeated on successive days. It was followed by febrile movement, usually accompanied by headache, nose-bleed, and diarrhœa. There were forty-four cases, altogether, in which diarrhœa was one of the first symptoms. In three there was blood in the passages from the first. In fifteen cases headache and fever were the first symptoms, and in six bronchitis was the principal difficulty during the first week. Pain in the right iliac fossa or over the abdomen was noted in a number of the cases.

The record of the temperature during the first week was more incomplete than at any subsequent period. In the cases where it was kept, however, it was noticeable that the temperature did not rise according to the fixed curve of typhoid fever, but was, as a rule, more or less irregular. It was frequently found that the transfer of the patient to the hospital produced a very decided, though temporary, increase in temperature. In some patients there were morning chills followed by fever, and this by sweating, all repeated a number of times during the first week, and in others there was a sudden fall of temperature lasting six, twelve, or twenty-four hours.

In the second week the temperature curve approached more nearly that of a regular continued fever. In some cases there were decided remissions in the morning (the temperature falling as low as 99° F.), and in others the morning temperature was the highest. In some instances convalescence was established after the fifteenth day, and in others there was a temporary remission at this time, the fever then going on for several weeks longer.

In the third week the temperature was much the same as in the second, while in the fourth there was a more decided fall in the morning. In some cases after falling for two or three days in succession it would rise again, and continue high for a week or two more. As a rule the temperature varied according to the severity of the disease, but this was by no means always the case. In mild cases the temperature was sometimes as high as 103° F. to 105° F., and in severe ones sometimes as low as 100° F. to 103° F.

The pulse varied greatly, of course, in different patients, and was generally more rapid, and sometimes dicrotic, in the third week. It was sometimes both feeble and slow, and a very rapid pulse was usually an unfavorable sign. In cases where the patient died with low temperature the pulse was apt to be feeble and rapid. The appearance of the facies was generally characteristic.

The tongue in most of the cases was at first coated down the centre with a thick white fur, and afterwards became brown and dry. In some, however, it remained clean from the first, but became dry and fissured. The moistening of the tongue was always a favorable sign. Delirium was well marked in forty-one cases, and was sometimes so severe that it was liable to be mistaken for acute mania.

Diarrhœa, as had been stated, occurred very early in a large proportion of the cases. There was diarrhœa in eighty-two cases altogether, and in fifty-one it continued throughout the attack. Constipation was noted in eighteen cases, and was apt to be associated with excessive tympanites. The characteristic eruption was found in forty-four cases, and Dr. Delafield remarked that during the present autumn he had found it much more common than had usually been the case for the last five years in New York.

Complications. Hæmorrhage from the bowels was present in twenty-three out of the 102 cases, and in six of them seemed to be the immediate cause of death. The characteristic hæmorrhage of typhoid fever, due to ulceration, was met with in the second week in most of the cases in which it was noted. In three cases, however, at the very outset of the disease the diarrhœal passages were streaked and mixed with blood, and this could not, of course, have come from ulcers in the intestines. In two cases there was a constant bloody discharge from the bowels which came on late in the disease, and which resembled the hæmorrhage met with in cancer of the rectum. In those cases in which the characteristic hæmorrhage of typhoid fever was noted a well-marked fall of temperature usually took place within a few hours after its occurrence, but there were many exceptions to this. Hæmorrhage was always an alarming symptom, and out of the twenty-three cases in which it was seen only nine finally recovered.

In three cases a well-marked pustular eruption occurred covering the whole body, and in five there was suppurative inflammation of the middle ear. Severe pharyngitis with the exudation of false membrane occurred in one case, and a moderate degree of catarrhal pharyngitis in a large number of instances. Bronchitis of severe type or broncho-pneumonia was observed in twenty-four cases, in some of which it was the immediate cause of death. Slighter forms of bronchitis were very common. Lobar pneumonia occurred in two cases, and in both was apparently the cause of death. Enfeebled heart action was frequently met with.

Peritonitis was observed in only four cases. In two it was caused by perforation of the small intestine, and in one of the vermiform appendix from ulceration, and in one it was due to inflammation of the mesentery. All four proved fatal. Dysentery was noted in five cases, four of which recovered.

Duration. In sixty-one cases which recovered (exclusive of relapses) —

1 case recovered in	16 days.
4 cases recovered in	18 days.
6 cases recovered	at end of third week.
19 cases recovered	at end of fourth week.
12 cases recovered	at end of fifth week.
4 cases recovered	at end of sixth week.
4 cases recovered	at end of seventh week.
1 case recovered	at end of eighth week.
9 cases recovered	at end of ninth week.
1 case recovered	at end of tenth week.

The largest number of recoveries, therefore, took place at the end of the fourth and fifth weeks. In cases lasting longer than the fifth week there were often periods when the temperature would fall, and, after remaining low for a time, would rise again. Well-marked relapses occurred in only seven cases, and they all recovered.

Of the 102 cases, thirty-four proved fatal; fifteen of these being directly attributable to the disease itself, and the rest to complicating conditions. In most of the former cases the temperature ran high (104° F. to 107° F.), but, as a rule, was not continuously so up to the time of death. The pulse was feeble, and usually rapid. In six cases death resulted from hæmorrhage, in one from syncope, in four from peritonitis, in three from bronchitis, or broncho-pneumonia, in two from lobar pneumonia, in one from rupture of the spleen, and in one from dysentery during convalescence; while one patient died from collapse (the temperature falling to 95° F. in the rectum), a few days after a very thorough sponging with ice water and lumps of ice.

Treatment. In mild cases the patient was simply put to bed, and placed on milk diet, some of the hospitals using peptonized milk in preference. Alcohol was given in some shape by some physicians, without exception. By others it was reserved for cases with feeble heart-action. Digitalis, convallaria, and caffeine, were also used as heart tonics. In some hospitals quinine was given in nearly every case, while in others it was scarcely used at all. In some it was employed only when the temperature was as high as 103° F. General bathing seemed to have been about abandoned during the past year; although before that it had been used quite extensively. Sponging the whole body, the Kibbie cot, and the cold pack were still employed to some extent in some hospitals; but in others the use of cold water as a means of reducing temperature was about entirely abandoned. For tympanites the use of turpentine was still the standard treatment. For intestinal hæmorrhage opium and ergot were employed, and for restlessness and sleeplessness opium was still much used by some. For diarrhœa the agents relied upon were opium, opium with bismuth and pepsin, and, in some hospitals, acetate of alumina. In one hospital large doses of calomel were given, if the case was seen early, in the hope of aborting the disease. Salicylate and benzoate of soda and tincture of iodine, combined with carbolic acid, given with the idea of counteracting the typhoid fever poison, were but very little used.

DR. BARKER remarked that the paper seemed to him the most exhaustive analytical paper on typhoid fever since Murchison's contributions, and called attention to a number of points which had struck him during the reading of it, and which he would suggest as topics for discussion.

DR. LOOMIS said he had hoped that Dr. Delafield would give a definition of typhoid fever, but though he had not done so, the symptoms which he had described in this carefully prepared record of typhoid fever in New York were not those which we had been led to believe characterized the disease in other countries. Liebermeister's description, for instance, would not at all tally with Dr. Delafield's. After mentioning the principal characteristic symptoms as described in the books, namely, the regular curve of temperature and the peculiar eruption and diarrhœa, he said that we must either regard the fever met with in New York as a simple continued fever attended with typhoid

symptoms, or else throw away all idea of typhoid fever as a distinct and special disease. In the course of his remarks he gave a *résumé* of the cases of typhoid which had been under his care at Bellevue Hospital since the last week in September, as prepared by his house-physicians. They were seventeen in number, and constipation was noticed in thirteen of them. The highest range of temperature was 105.4° F., and the average range was 101.25° F. The eruption existed in only four cases, and diarrhoea in four. Hæmorrhage occurred in two cases, and peritonitis in two. In each of the latter there were ulcerations in the large intestine as well as the small. Four of the cases proved fatal, but three of these patients died within three days after admission to the hospital.

DR. KINNIGUTT spoke particularly of constipation, and advised frequently repeated small enemata of thin gruel for its relief. Out of eighteen cases which had been treated at St. Luke's Hospital during the present season, constipation existed in seven, and diarrhoea in nine. He then said in regard to relapses that he believed them to be wholly independent of errors in diet or other incidental causes, and in concluding his remarks advised great caution in the use of alcohol in typhoid.

DR. JANEWAY thought that the statistics of the health department showed conclusively that typhoid had not of late been more prevalent than formerly, especially when the great increase in the population of the city was taken into consideration. Unlike Dr. Loomis, he believed that typhoid fever was the same disease everywhere; for, however greatly the symptoms might vary, the lesions were always the same. Both Liebermeister and Murchison admitted that atypical cases occurred. He spoke at considerable length of the specific origin of the disease, and referred in confirmation of this to the history of various outbreaks of the fever with which he was familiar, especially at the Roman Catholic Half Orphan Asylum, and the Deaf and Dumb Asylum in New York, at Princeton College, and at Fort Washington. In regard to the eruption of typhoid, he agreed with Dr. Delafield that it was particularly well-marked this season, and said that he had not met with a case of the fever in an adult after the tenth day in which it was lacking.

DR. T. A. McBRIDE, after speaking of the milder forms of typhoid as met with at the dispensaries and hospitals, mentioned that he was in the habit of treating the high temperature incident to the disease with kairin. If the temperature was 103° F., or higher, he gave seven grains of the drug every hour, and if it was not higher than 102° F. he gave three and a half grains every hour. This plan was invariably successful, but he never brought the temperature lower than 101° F. for the reason that when this was done the patient was apt to have a chill, and the temperature then rose rapidly again.

After brief remarks by Drs. Barker, Pinkney, and Fruitwight, DR. DELAFIELD closed the discussion. That the disease did not always have typical symptoms, he said, was well known, and that was the very reason why he had thought it would be well to bring these cases together. Liebermeister, he thought, had sacrificed truth in order to give a clear and definite description of the disease, and thus had presented an exaggerated picture of it. But the lesions were the characteristic feature of typhoid, and however they might differ in degree, they were always the same in

kind. As to constipation, he considered it a positive evil to the patient, and always gave laxatives for it, during the first week, when they were required. After that he thought enemata were better.

Recent Literature.

Die Anämie. Von S. LAACHE. Universitäts-Programm für das 2 Semester, 1883. Christiania. 1883.

Dr. Laache received in 1881 a gold medal from the University at Christiania, Norway, for a monograph upon the Condition of the Red Blood-Corpuscle in Secondary Anæmias. The present volume is an amplification of that essay, the work for both having been carried on in the physiological laboratory at Christiania under the general supervision of Dr. Worm Müller, Professor of Physiology at the University. The blood and its corpuscles are considered in the normal state and in anæmic conditions, which latter are divided into secondary and primary, and supplementary primary (a heading which comprises leukæmia and pseudo-leukæmia). This work is published in German, contains 276 octavo pages in addition to a large number of charts, and is very *eingehend*.

Inquiries into Human Faculty and its Development. By FRANCIS GALTON, F. R. S. New York: Macmillan & Co. 1883.

This volume is composed of numerous memoirs by the writer on various subjects which have been scattered through the pages of different periodicals between the years 1863 and 1883, and are now brought together in substance and in logical sequence as having an underlying connection.

With the name of Mr. Galton, and with some of these memoirs, the readers of the JOURNAL have already become familiar through its pages, and those who are interested in such subjects as the Relative Power of Nature and Nurture, Composite Portraiture, Visualized Numerals, Physiognomy of Phthisis, Anthropometric Laboratories, would do well to consult this book, where these subjects are correlated with others and with each other, and where much of what the author has to say about them is revised and rewritten. The book certainly answers the chief claim made for it by Mr. Galton — it is suggestive.

The Diagnosis and Treatment of Diseases of the Ear. By OREN D. POMEROY, M. D., Surgeon to the Manhattan Eye and Ear Hospital, etc. With One Hundred Illustrations. New York: Bermingham & Co. Price \$3.00.

A work of some four hundred pages very well arranged and well written, not too scientific, and containing some few inaccuracies of reference, due to an insufficient study of the previous literature of the subject. It is a very good guide for the young or very busy practitioner.

The illustrations of instruments and apparatus are good, as also are some few of the anatomical plates, but those relating to pathological conditions are imperfect, and scarcely serve their purpose.

Medical and Surgical Journal.

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THE REGULATION OF IMMIGRATION.

WE last week took the occasion of a legislative hearing on the subject to say something about the desirability of making separate provision for the criminal insane. This is an important question, but an even more important one is whether anything can be done by the General or State Governments to diminish the number of this class by guarding against the introduction into the country of the materials from which the criminal insane, as well as the other insane, are largely recruited. This question was introduced at the late meeting of the American Public Health Association at Detroit by a paper from Dr. Foster Pratt, of Michigan, on the Increase of Insanity in the United States, Its Causes and Sources, which is referred to in our brief report of the meeting in another part of this issue of the JOURNAL. Dr. Pratt's paper is based upon the United States census for the decades ending in 1850, 1860, 1870, 1880; the imperfections in which, as far as such exist, are equally applicable to all except the last, and do not invalidate their usefulness for purposes of comparison. If the writer's figures are correct, and we have no reason to question them, one can hardly avoid accepting his conclusions, especially as they tally with those to which *a priori* reasoning would lead.

"(1.) Beginning with 1860, while the foreign born population had increased, since 1850, nearly 100 per cent., the foreign born insane had increased 181 per cent.

"(2.) At the close of the next decade, in 1870, the total foreign born had increased only about thirty per cent., but the insane of this class had increased nearly 100 per cent.

"(3.) In 1880, the foreign born had increased less than twenty per cent., but their insane had increased 150 per cent.

"(4.) A statement of the proportion of insane to each class of population—native and foreign—at each census, shows very clearly the relative rate of increase.

"In 1850, of native population, there was one insane in 1545; and of the foreign born one in 1095.

"In 1860, of native born, the proportion was one in 1559; and of foreign born one in 717.

"In 1870, native born furnished one in 1258; and foreign, one in 497.

"In 1880, native population shows one insane to 662; and foreign born, one in 250.

"Thus it becomes manifest, that while the proportion of native insane to native population remained nearly the same in 1850, 1860, and 1870, the proportion of foreign insane in the foreign element rapidly increased from one in 1095 in 1850 to one in 497 in 1870; and when we reach the approximately accurate aggregates of 1880, we find the native insane amount to one in 662 of native population, while the foreign born insane are one in 250 of foreign born population; and that nearly one eighth of the aggregate population furnishes nearly one third of the aggregate insane."

Again:—

"(1.) That the proportion of insane to native white population, in the Northern States, is one in 597; in the Southern States, one in 660; and in the District of Columbia and Territories, one in 748.

"(2.) That among the foreign white the proportion in the Northern States is one in 248; in the Southern States, one in 283; and in the District and Territories, one in 236.

"(3.) That among the colored races, the proportion in the Northern States is one in 545; in the District and Territories, one in 680; and in the Southern States, one in 1235.

"(4.) That the average proportion of insanity among native whites in the entire United States is one in 618; among foreign whites, one in 250; and among the colored races, one in 1097; and that the total average for the entire country, of all population, is one in 545¹⁰⁰."

Believing in his figures, always be it understood for purposes of comparison, and accepting the conclusions to which they lead, namely, that there has been a marked increase of insanity among our native population, but a still more exaggerated increase among our foreign population, Dr. Pratt asks, what we are going to do about it.

The native must learn to adapt his life to his vital as to his financial resources; to live at a lower pressure. On the other hand, and this is the important point, the foreign element from which the inmates of our asylums are so largely drawn—the debauched and diseased, the criminal, the pauper classes—must be kept out of the country, not by prohibiting their landing here, but by preventing their embarkation on the other side of the Atlantic. Without charging foreign governments with complicity in this matter of "assisted emigration," which without the name has undoubtedly been going on more or less vigorously for many years, those who know anything about public paupers and the public sick at home have no difficulty in realizing the process which takes place. It is but necessary to call to mind the relations of one State to another, of one town to another, of one hospital, even, to another.

It is suggested that the general government attach agents to our consular offices at certain foreign ports whose certificates should be required from all immigrants, and that it should be the duty of such agents to detain suspicious emigrants, and look up their antecedents. Some such system does not seem to us necessarily impracticable, and the mere appointment

of agents would act to a certain extent as a check, just as a light in the window discourages a burglar. We are a young nation, and a strong one, but there is a limit to the amount of debased blood, as to the amount of debased coinage, which can be introduced into the national circulation with impunity.

Congress passed an act under date of August 3, 1882, which was intended to control the landing of pauper immigrants, but, unfortunately, it is inoperative, no penalty having been provided for its violation. The law states, after providing that certain officers or boards in States shall be designated by State governors to supervise immigration, "*their officers shall be authorized to go on board of and through any such ship or vessel, and if on such examination there shall be found among such passengers any convict, lunatic, idiot, or any person unable to take care of himself or herself without becoming a public charge, they shall report the same in writing to the collector of such port, and such persons shall not be permitted to land.*" In compliance with this law the collector forbids the landing of such persons, but without avail in consequence of want of penalty to enforce the order.

Hence we are glad the Association voted to memorialize Congress that legislation be adopted to check, not merely the landing in, but the coming to this country of the foreign criminal and pauper classes, and those with a pronounced insane heredity, for under existing conditions the declaration of Dr. H. P. Walcott, of this State, that "it is an indisputable fact that our poor-houses are filled with foreign paupers, our hospitals with foreign cripples, and our insane asylums with foreign insane persons," cannot be dismissed as a mere rhetorical flourish.

DIET IN DIABETES.

PROFESSOR AUSTIN FLINT, in a recent lecture on diabetes, speaks of the difficulties to be encountered in effecting a suitable anti-diabetic diet. The alimentary regimen of this disease consists in withholding from the food, almost entirely sugar, in any form and all the starchy constituents of food capable of being transformed into sugar. This is a matter of great difficulty, which requires the constant supervision of the physician, and can only be accomplished by the latter placing before the patient a list of all articles of food which are permitted, specifying them, and also all articles of food which he must not take. The patient should have such a list before him in the hand-writing of his physician, and such articles should be selected from the allowable ones as to make a variety from day to day, and so prepared by the artifices of cookery as to make them satisfactory. This can be done, but it requires patience and it requires care on the part of the patient or somebody else, and it requires means. The poor man can hardly afford the bill of fare or the severe restrictions of the diabetic hygienist.

The article of food which will cause most trouble is bread, and diabetics realize the force of the statement that bread is the staff of life. Frequently they

say that they care little for bread, that they can get along very well without it, but they do not find it so after a while. Therefore there have been numerous substitutes for wheat flour bread, but few of which are to be commended. There is what is called diabetic flour, which is bran very finely ground so as to divest it of all rough particles, but it has no nutritive value whatever, and is, as Dr. Flint says, no better than sawdust. Dr. Flint commends as more satisfactory than anything which he has before tried the gluten bread prepared by the Health Food Company of New York. It is not entirely devoid of starch, but it is so prepared that it is not deprived of the agreeable qualities of ordinary bread, and helps render the animal part of the daily dietary more acceptable.

Bouchardat is doubtless the great authority on the dietary regimen of diabetic patients, as stated in the lecture which we printed last week. While rigidly excluding the long list of starchy and saccharine aliments, he allows the diabetic to eat without fear meat of all kinds, brown or white, broiled or roasted, seasoned with any sauce pleasing to the palate, provided there be no flour or sugar in it. He especially commends the flesh of carnivorous animals, and advises their trying cat, dog, and fox! The liver should not be eaten, and the fat of meat should be as far as possible avoided. All sorts of fish, shell fish, and lobsters are permitted. As for the green succulent vegetables there is a wide latitude of choice; spinach, endives, lettuce, sorrel, asparagus, artichokes, cress, dandelion, etc., being good for diabetics, and salads may be allowed, with a full complement of oil and hard boiled eggs. For drinks, besides a moderate amount of good claret or Burgundy, which may be daily taken, brandy and soda water may be used, and fresh beef tea, which latter is a capital quencher of thirst.

Many of the articles allowed by Bouchardat are not altogether devoid of sugar or starch, but the quantity is so small as not to be considered dangerous, and the menu of this great authority has not been improved by any of the subsequent writers on this disease, if we may credit Chambers, from whose Manual of Diet we quote.

JUDICIAL MURDERS.

THE English medical journals had hardly ceased protesting against "the judicial murder" of the lunatic Gouldstone before they found similar cause of complaint in the sentence of death passed upon James Cole for murdering his child, three years and a half old, by lifting it by the legs and dashing out its brains against a wall. Cole was not under the influence of liquor or of passion at the time. He was certified as insane in 1877, and was committed to the county workhouse a second time in 1879. He had epileptic relatives, and was himself addicted to drink. He had delusions of persecution, that he had been poisoned, and that he was to be killed, for a sufficient length of time to have become mentally impaired, and suffered from a form of insanity almost absolutely incurable, and under the influence of which crimes are quite certain to be committed if there are opportunities enough afforded.

The officers in the jail testified that the prisoner behaved like a sane man. His son and Dr. Jackson gave positive evidence of his insanity. Other witnesses in his behalf were not called, although they were in attendance. Dr. Jackson stated, in a letter to the *Times*, that proofs which would have convinced the jury of the prisoner's insanity were in the possession of the Crown at the time of the trial, but that they were willfully withheld. The defense was, at all events, very summarily disposed of.

Mr. Justice Denman, in passing sentence, said that the evidence established the fact that the prisoner was laboring under delusions, but that he knew what he was doing, and knew that he acted contrary to law; that he committed the act under the influence of passion which had got possession of his mind from want of sufficient control. The knowledge of right and wrong has been not seldom made the test of responsibility in the courts, of late years even, and England is far behind France, Germany, Austria, and this country in that respect.

MEDICAL NOTES.

— Col. Robert Murray, assistant surgeon-general, and senior surgeon of the service, has been appointed by the President surgeon-general of the army.

— Dr. E. N. Whittier has been appointed by the Commissioner of Pensions a member of the Board of Pension Examiners for Massachusetts.

— Dr. Depaul, the well-known professor of obstetrics and physician to the Lying-In Hospital of Paris, is dead, at the age of seventy-three.

— Turgenev, the Russian novelist, is said to have had a brain weighing sixty-three ounces.

— Mr. John P. Howard has announced his intention of giving a new building for the medical department of the University of Vermont, at a cost of about \$40,000. The old building will be refitted for a gymnasium at the expense of the same gentleman, who will then have expended more than \$400,000 for the university and the city of Burlington in ten years.

— F. P. Atkinson reports, in the *British Medical Journal*, September 15, 1883, the case of a lady of good position, who was married at sixteen, and died at sixty-four, who had thirty-nine children by the same husband. There were thirty-two females and seven males, with only two sets of twins. All the children attained their majority.

— An item from *L'Union Médicale* shows that certain principles of dealing with the foibles of men are common the world over. It seems that a mysterious kind of personage installed himself as a doctor in the most frequented part of the Faubourg Montmartre. Admission could only be gained to his presence after infinite questionings. His name was a foreign one, and all his servants were bound over to secrecy. His consultation room was, in consequence of all this, besieged from morning to night, until at last the attention of the police was attracted. A *commissaire* called upon him and demanded an inspection of his diplomas, expecting to find him pale and trembling at the request. Nothing of the kind. The suspected

practitioner, all smiles, opened a drawer of his bureau and exhibited to his visitor documents which were perfectly authentic. "And now that you have quite assured yourself, M. Commissaire," said the doctor, "pray do not betray me; for if my patients only get to know that I am a mere Doctor of the Medical Faculty of Paris, I shall see no more of them."

— There is a case reported in *Schmidt's Jahrbücher* of poisonous symptoms following the use of an injection of a four per cent. solution of boracic acid for chronic diarrhoea, and the *Medical Record* reports a death supervening upon its external use in an ulcer. It would appear that boracic acid is not as harmless as is usually supposed.

— The new Primate of England has already succumbed to overwork, and been obliged to take complete rest. Several others of the English bishops are in the same condition, and it is said that as a body they are much overtaxed in strength by their duties.

NEW YORK.

— The committees of the Saturday and Sunday Hospital Association having in charge the formation of trade auxiliaries met on the 8th of November, at St. Luke's Hospital, when encouraging reports were received from the various auxiliaries already organized, and a plan was adopted providing for the issuing of coupons by the Hospital Association to all trade auxiliaries, these coupons to represent dollar for dollar the amount contributed by each auxiliary, and entitling them to that extent to draw on the hospitals within the Association for service in behalf of any sick poor the auxiliaries may recommend.

— The Central Organization of the New York State Medical Association to Uphold the National Code of Ethics has just published a catalogue of the members of the medical profession in the State in which the vote of each individual on the codes of ethics is recorded as far as it has been possible to ascertain the facts of the case. It contains the names of 5219 physicians, which are classified as follows:—

For the National Code	2424.
For the New Code	943.
For no code	210.
Unclassified	31.
Uncommitted	1611.

The unclassified, it is explained, have responded to oral or written inquiry, but have not signified exactly where they stand, that is to say, their answers do not entitle them to be included under any one of the first three headings. The uncommitted have not been heard from. The numerical exhibit of the vote of the State is by county, the names of the fifty-nine counties being arranged in alphabetical succession. In the county of New York the figures are as follows:—

For the National Code	770.
For the New Code	423.
For no code	58.
Unclassified	10.
Uncommitted	445.

And in the county of King's (Brooklyn) as follows:—

For the National Code	232.
For the New Code	91.
For no code	31.
Unclassified	5.
Uncommitted	164.

The catalogue is open for correction, and is accompanied by a circular in which the Council of the Association request that all errors in it may be pointed out. Their desire, it states, is to know the whole truth concerning the attitude of the profession in respect to the ethical controversy, and they deem this a fair and equitable method of ascertaining the will of the entire profession of the State. "The question to be solved," it continues, "is whether the profession wishes to retain its allegiance to the American Medical Association or to disfranchise itself therefrom by sustaining the New Code or by abrogating all codes of ethics. It is believed that the time has come for every member of the profession in the city and State of New York to declare himself on one side or the other—for or against the National Code. Therefore, those who are still uncommitted are earnestly appealed to for their decision.

Miscellany.

OBSERVATIONS ON THE THERAPEUTIC RESULTS OF HYPNOTISM.

DE GIOVANNI has recently published, in a reprint from the *Gazetta Medica Italiana*, some observations on the above subject which are thus summarized in the *Centralblatt für klinische Medizin*, No. 42, 1883:—

Giovanni reported five cases in which he had employed hypnotism for therapeutic purposes. Four of the patients were females, with markedly nervous constitutions, the fifth a young man of eighteen years. In the first case there was a circumscribed painful spot in the lower portion of the dorsal spine persisting after a contracture of the lower extremities that had been cured by massage; in the second an obstinate nervous vomiting; in the third a nervous affection of a very diverse and changeable character consisting of contractures, neuralgias, anæsthesias, etc., which, according to the opinion of the reporter, did not depend upon hysteria.

In the two first cases Giovanni succeeded in hypnotizing the patients at the first attempt while he caused them to look at the point of his finger held fourteen to fifteen centimetres distant from their eyes, and a little above their level. With the third patient in the first sitting, although it lasted an hour, no sleep occurred, and but little in the second, but in the latter some tremulous movements of the legs took place without, however, the patient's being conscious of them. In the third sitting she came into an evident hypnotic state. In all three cases complete cure followed after two to four weeks of treatment, whereas they had resisted every other treatment. The sittings took place from one to three times daily. The fourth patient suffered from alopecia areata and a peculiar affection of the skin. Giovanni wished to excise a bit of the skin for microscopical examination, and hypnotized the patient with that object. He was able to perform the little operation without the patient's experiencing the least pain. For a similar purpose he hypnotized the fifth patient, who was suffering from an acute, exceedingly painful coxitis, and on whom a bandage was placed during his sleep.

The phenomena observed were in all cases the following: At first accelerated movements of respiration

and movements of swallowing occurred. The pulse, too, became quicker. Then the lids closed, and the eyeballs turned upward; then quiet sleep during which the tendon reflexes were exalted, but the neuromuscular excitability not enhanced. Complete muscular relaxation and cutaneous anæsthesia followed, yet needle-pricks called forth lively reflex movements. It was noteworthy that after the awakening sharp pain was experienced in the place of the puncture, and circumscribed reddening of the skin appeared as after a flea bite. The lids were convulsively shut during the sleep. The sense of hearing was the least altered. The four patients conversed during their sleep as if they had been among their own families. After fourteen to fifteen minutes' duration of the sleep awakening occurred spontaneously or after blowing upon the face. Except for a transient feeling of heaviness in the head the condition of the patients was good after awaking. In the fifth case at first sleep came on, but no anæsthesia; this became complete after Giovanni had employed a moderate short pressure on the eyelids and the roots of the nose, and had rubbed the skin of the forehead. In like manner could the hypnosis be hastened by a slight rubbing of the eyeball.

Giovanni is of the opinion that in the hypnotic sleep the conduction to the brain is completely severed, while that to the spinal cord is not disturbed, as is indicated by the persistence of the reflex movements. The appearances observed after the needle punctures are explained by extraordinary excitability of the peripheral nerves and of the spinal reflex action, as well as by vaso-motor paralysis at the punctured spot during hypnosis. He calls for further therapeutic researches on the safety and efficacy of hypnotism.

PREHISTORIC TREPHINING.

In *Science*, August 3d, is a résumé from *Bull. Soc. Anthropol.*, Paris, of the novel experiments of L. Capitan calculated to throw light on this much discussed subject. Many years ago Dr. Charles Rau, wishing to know how long it would take a savage to bore a hole through a hard rock with a wooden spindle, using sand and water, actually made the experiment, and has put on record his experience. M. Capitan has proceeded in the same way respecting prehistoric trephining, testing the various methods of boring and of removing a rondelle or fragment of bone. The experiments on the skulls of the dead were to study the methods, the difficulties in the way of the operation, and the time required. It is the trephining of the living among savages and the fatality of the result that most interest the student, therefore M. Capitan continued his researches upon living canine subjects. The first experiment was upon a small spaniel. The skin of the head and temporal muscle were removed, and the trephining was practiced upon the antero-superior portion of the right parietal. The operation was not very painful, and in twenty minutes a rondelle of bone was removed. There was little hæmorrhage, and the meninges were not wounded. After a few days the spaniel was as lively as ever. Two other dogs were subsequently treated with like success. Just what the method and amount of cicatrization might be, after such primitive operations, will be known when the autopsy of the subjects takes place in the future.

THE NEW BUILDING OF THE BOSTON DISPENSARY.

For the past five years the necessity of a new building for the Boston Dispensary has been discussed. Early in this year the requisite funds were secured, plans agreed upon, and in March last the active work of the charity was transferred to temporary quarters on Washington Street and the old building demolished, which had been occupied since July, 1856. The cut given below will recall the double house which so

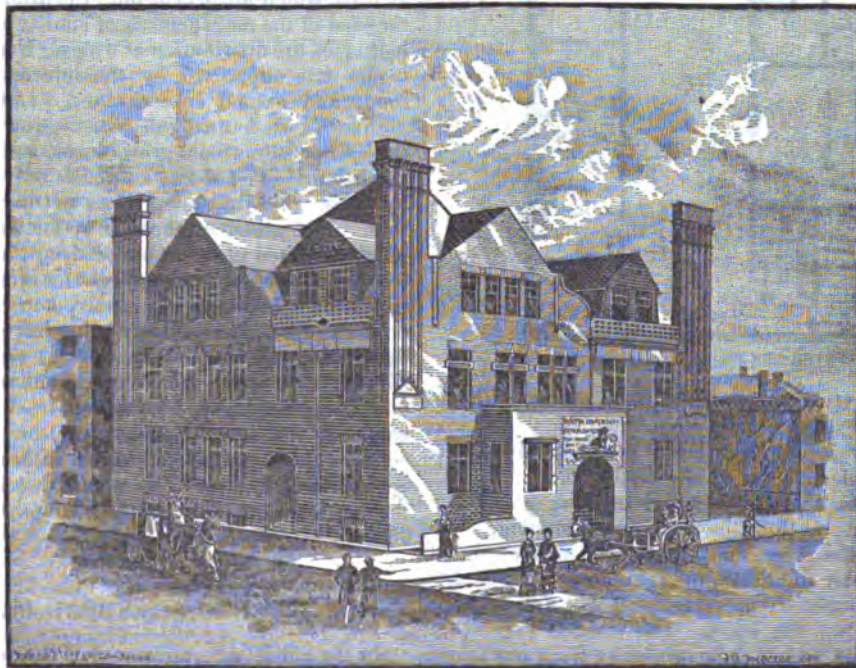


long was known as the Central Office, and will emphasize the contrast between the old and the new. As rapidly as possible the new building has been pushed forward, and during the past week the charitable work

of the institution has been restored to its old location.

The new building is situated on the site of the old building, at the corner of Ash and South Bennet Streets.

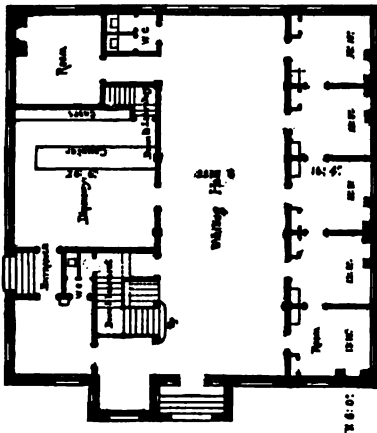
The building itself is very nearly square, the dimensions being sixty-five feet eight inches by sixty-five feet four inches, with an entrance porch and bay on Ash Street. The walls are of brick, with brown sandstone trimmings, surmounted by a slated hipped-roof, with a gable on each corner. The chimneys have been so treated as to make an attractive feature of the design, and the whole presents an appearance both original and unique, well represented by the illustration given below. The building contains a basement, first and second stories, and a commodious attic. The only finished portion in the basement is a laboratory twenty-five by forty feet, fitted up with all the requisites for the compounding of medicines, the remaining space being devoted to a store-room for the laboratory, fuel bins, and furnaces. The first story contains a hall twenty-two feet wide, which runs the entire length of the building, and which is intended as a waiting room for patients; on one side of this hall are the apothecary's quarters, with a separate staircase to the laboratory below and a special entrance from South Bennet Street, trustees' room, lavatories, and one consulting room, and the other side is divided into five consulting rooms for the attending physicians. The second story contains a hall of similar dimensions to the one below, with an ample and attractive staircase leading thereto,



with surgeons' operating, lecture, and consulting rooms, lavatories, etc., on one side, and five consulting rooms on the other. The annexed plans show the manner in which each floor is divided. The attic contains the janitor's quarters (consisting of five rooms and bath room),

and a large unfurnished apartment, which can be used for storage or such other purposes as the future interests of the institution may suggest. The building is heated by two furnaces, in addition to which each room is provided with an open fire-place, which provides

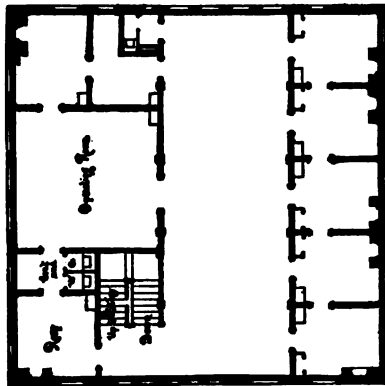
free exit for foul air. The finish throughout is ash, with floors of best hard Southern pine. Soap-stone sinks, with hot and cold water, are placed in every room, and the plumbing throughout is in accordance with the most approved sanitary rules. Each room contains a closet for the accommodation of the physician on duty, and is simply furnished with the neces-



Clarence S. Luce, Architect.

First Story. Plan.

sary chairs and tables. All the chairs throughout the house are reproductions of an old Plymouth chair, which are not only attractive by their antique appearance, but exceedingly comfortable to those who use them. The Trustees' room, which is furnished in the



Second Story. Plan.

same general style as the consulting rooms, with the addition of a simple rug upon the floor, contains the portrait by Rembrandt Peale of Benjamin Dearborn, an early benefactor of the institution.

The old picture of the Good Samaritan, which has become familiar to long generations of students from its place over the front door, and which was executed in 1797 by John Johnston, for the sum of thirty dollars, has been carefully preserved and will find an honored place within the walls. The wooden carving of the same subject, which came originally from the house of Benjamin Dearborn, and was by him given to the Dispensary by a special clause in his will, ornaments the wall of the lower waiting hall.

Any one accustomed to enter at the old door would naturally raise his eyes when passing through the new entrance to see how the old symbol of charity was perpetuated. The door is surmounted, as is well shown

in the illustration, by a bas-relief carved in Philadelphia pressed brick laid in English Portland cement. In point of construction the building is believed to be second to none in the city of Boston, great care having been taken to make it substantial and durable. The plaster work is applied directly on the brick walls, which are hollow, and the halls and rooms are well lighted by generous windows. Ash settees, designed expressly for this building, are to be provided for the halls, for waiting patients, and are to be so arranged that patients for each particular room will be seated facing and in close proximity to it.

The Boston Dispensary is the oldest charitable institution in Boston, and was the third of its kind established in America. The building which we have just described is thronged every morning with a crowd of individuals seeking relief. The enlarged space afforded at present gives ample opportunity for the growth of special departments, which have maintained an existence under some difficulties in the former restricted quarters. Clinical instruction has become quite a prominent feature in dispensary work. Comparatively few of the physicians are connected with the school, but students are for the most part welcome, and it is the policy of the management to make the opportunities here presented as widely useful as possible. The great work of the Dispensary lies in its house visiting. From 13,000 to 14,000 patients are cared for each year at their homes. This was the work originally contemplated by the founders of the charity, and it is still the silent, unostentatious, but constant ministration to the poor which only those who have watched its operations can fully appreciate. A feature, almost unique in charitable institutions, in this section of the country at least, which attracts at once the attention of those interested in the management of similar enterprises, is the matter of the distribution of drugs. For years the institution was supported by the interest of its invested funds and annual subscriptions. Little by little the number of its annual subscribers grew less and less as the earlier subscribers grew fewer, and year after year the balance sheet showed a deficit only to be made up by the sacrifice of capital or an extraordinary subscription. The principal expense by far was due to the almost unlimited distribution of drugs, and naturally, in looking for relief, it was sought by economy in this department. It was finally resolved to charge ten cents on each prescription, liberty being left each physician to distribute such free prescriptions as seemed to him absolutely necessary. The experiment was entered upon with some hesitancy, but proved from the first a success. It not only checked useless prescribing, but added a third source of income sufficient to do away entirely with the previous annual deficit, and no suffering has been entailed by the change, so far as can be seen.

SURGEON-GENERAL CRANE.

In the official announcement of the death of Surgeon-General Crane just issued, Acting Surgeon-General Huntington gives the following summary of his life:—

His record, honorable and spotless, lives after him, a source of pride and satisfaction to his friends, a model worthy of imitation by all. The larger portion of his official life was engaged in administrative duty, for which he had always manifested a peculiar fit-

ness. Selected to assist in the arduous and important duties devolving upon this Office during the latter years of the War of the Rebellion, his sound judgment, delicate sense of justice and right, deliberate action, and firm decision, soon won for him an enviable reputation, and materially assisted in raising the Medical Corps of the Army to the high degree of discipline and efficiency which has characterized it in the past and present.

In the literary and scientific work of the Office he manifested untiring interest; to his watchful care, encouragement, and aid, is largely due the successful progress and completion of undertakings which have gained for the Medical Corps the admiring recognition of the world.

Thoroughly acquainted by early experience with the requirements of his Department, assiduously attentive to the routine of business even in its details, punctilious in regard to the rights of all, and earnest in his endeavors to promote harmony and a healthy *esprit du corps*, General Crane labored patiently, faithfully, and effectively for the best interests of his charge.

In his private life he was conspicuous for his firm, devoted friendships; for his kindly interest in, and sympathy with, the joys and griefs of those about him; for his habitual attention to the courtesies which adorn life. Unselfish and generous to a fault, his many deeds of kindness and charity were done quietly and without ostentation. He needs no higher tribute to his worth as a man than the widespread sorrow which his loss has occasioned, and the respect for his memory which will long be cherished by all who knew him.

SURGEON-GENERAL MURRAY.

THE promotion of Assistant Surgeon-General Robert Murray to the superior office rendered vacant by the recent death of Surgeon-General Crane fills the highest position in the Medical Service of the United States Army in a way which, we are sure, will meet with general approval. Whatever personal preferences members of the profession may have had for either of the two other prominent candidates — and each of them had many warm supporters — all will readily acknowledge that Dr. Murray by long, faithful, and eminent service has fairly earned a place whose duties, no one questions, he will discharge with entire satisfaction.

Dr. Murray, in addition to being the oldest colonel in the medical service, was in the direct line of promotion; facts which, other things being equal, should be given due weight. He played an active part in our late civil war; and both as Medical Director of the army corps commanded by General Buell, and later as Purveyor in charge of the large depot of supplies in Philadelphia, he exhibited unusual executive ability and an aggressive honesty.

Though Dr. Murray will, by the rules of the service, be retired from active service in about eighteen months, he was at the time of his appointment on duty at Governor's Island, New York Harbor, and is entirely equal to the discharge of any work which the surgeon-generalship may devolve upon him.

SPINAL INJURY AND MONEY.

DR. J. O. WHITNEY, of Pawtucket, R. I., writes us *a propos* of this subject: —

This topic has been alluded to in the JOURNAL recently. Rehoboth, another town, and a railroad entering Boston paid about \$5000 each. The three claimants are well; made rapid recoveries. A man stepped into a hole in the street in this town in June, 1882; shortly after made claim for a large sum, and was paid in a few months \$2600. I saw him in October last; told him he would, I thought, recover; recommended blisters. When he got the cash he said, "No more blisters now." His regular attendant told me, a few days ago, "The man is walking about; never had spinal inflammation; grew fat all the while." I was sure he feigned, and if his doctor is right he shammed the whole as to the palsy of the legs. A soldier injured his spine in service; a rigid bent spine, little palsy, and a large pension. A man had his cervical spine violently crushed forward; little or no palsy yet; cannot erect his head; \$2000. The late Dr. Phelps, of Attleborough, was hurt falling down stairs; palsy in hands first in a year, as I remember it; gradually got worse, and death in some ten years or more.

CAN CANCER OF THE PENIS BE ACQUIRED BY INOCULATION FROM CANCER OF THE CERVIX UTERI?

In the *New York Medical Journal* (October 27th), Dr. P. F. Mundé writes on the above subject, taking as his text the remark of a noted gynecologist that there is "undoubtedly great danger" of such inoculation inasmuch that husbands should be cautioned against having coitus with wives suffering from cancer of the womb. Dr. Mundé addressed inquiries on this point to the following gentlemen: Profs. T. E. Satterthwaite, W. H. Welch, R. F. Weir, and John A. Wyeth, of New York; Vincenz Czerny, of Heidelberg; and Theodor Billroth, of Vienna, and in summing up the testimony, he says: —

"The evidence of these experts certainly does not confirm the statement that 'repeated instances of cancer of the penis being contracted in this way' (by inoculation from cancer of the uterus) 'are on record.' None have seen or known of such an instance; the reputed cases are questioned by the writers who mention them, and the general belief is that such infection by contact can occur only under the most favorable circumstances, that is, when such contact is protracted, when a predisposition to cancer exists, either local or constitutional, and when an abraded surface is present. This statement applies equally to cancer in any portion of the body. The comparatively short period of contact between the penis and the female genital organs during coition must seem scarcely sufficient for the implantation of cancer cells on an abraded spot on the penis, however fully such short contact may suffice for venereal or septic infection.

"Did such short contact of an abraded living surface with a cancerous ulcer suffice for the inoculation of that disease, surely the gynecologists — whose index-fingers cannot always be protected from slight injuries, and who, unknowingly, examine many women with cancer of the cervix, making that very diagnosis by such digital examination — would long ere this have become inoculated with it. But no such instance is recorded.

"While thus the *first authenticated, unquestionable* case of inoculation of the penis with cancer cells from

a cancerous cervix seems as yet unpublished, and while it is still doubtful whether such inoculation actually takes place, still the *possibility* of such an occurrence cannot be denied, and I trust this communication may induce gentlemen who have met with cases in point to place them on record. Certainly the subject is of sufficient interest and importance, clinically and pathologically, to merit further investigation, and, if possible, ultimate positive elucidation."

ENORMOUS MILK-FLOW.

PROF. CH. REMY, in the *Archives Générales de Médecine*, tells of a young woman, seen by him in Japan, who gave over twelve pints and a half of milk daily, and Dr. Gomez Pamo gives in the *Anales de Cirugia*, in *La Revista de Ciencias Medicas*, in Barcelona, the following, says the *Journal of the American Medical Association*: A woman, married at sixteen years of age, whose menses, established at fourteen years, continued without interruption until the first month of marriage, when she became pregnant. After delivery lactation was established, and continued for twelve months without any appearance of the menses. Becoming again pregnant, she weaned her child; and this repeated itself *fourteen* times without any complication. She nursed each of her fourteen children up to the time that she felt herself again pregnant. During her pregnancies the flow of milk diminished somewhat, but never disappeared entirely. Immediately after delivery she gave the breast to the infant. The milk was abundant and of good quality. All the children were very robust, two of them having been born prematurely. During all this time, that is, from the first month after marriage to the present, seven years after the birth of the last child, the menses have not reappeared. She weaned her last child five years since, but the flow of milk has not diminished, in spite of all treatment; it is abundant and of good quality, and the breasts have to be drawn frequently to relieve the pain caused by tension. — *Louisville Medical News*.

NOTE ON DISINFECTANTS.

DR. W. E. BUCK writes in the *British Medical Journal*: "Most practitioners must have often realized the inefficiency of disinfectants in allaying the fetor of cancerous ulcers, an annoyance which sometimes troubles patients even more than the pain or the thought of death. I have used the whole round of disinfectants for cancerous ulcers, but all have failed in allaying the fetor and keeping the ulcer clean. The disinfectants tried were carbolic acid, sanitas, terebene, resorcin, creasote, boroglyceride, chloride of zinc, charcoal, etc. After failure with these, I tried a saturated solution of hyposulphite of soda added to an equal quantity of water, and found it exceedingly efficacious. The ulcerating surface was well syringed and washed with the solution, and was then covered with rags steeped in the solution. The granulations were kept clean, and the fetor was well kept under. Most disinfectants seem to lose their virtue after a few days' application, but I have used this one for months on the same patient with continuous good effects. It is cleanly, has no smell, does not stain, and is very cheap.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 16, 1883, TO NOVEMBER 23, 1883.

MOORE, JOHN, lieutenant-colonel. Relieved from duty as Medical Director Department of the Columbia. G. O. 29, Department of the Columbia, November 8, 1883.

BACHS, DALLAS, major and surgeon. Assigned to duty at Fort Adams, R. I. Paragraph 5, S. O. 215, Department of the East, November 19, 1883.

BROOKE, JAMES, major and surgeon. Relieved from duty at Angel Island, California, and assigned to duty as post surgeon, Presidio of San Francisco, California. Paragraph 1, S. O. 162, Department of California, November 14, 1883.

HORTON, SAMUEL M., major and surgeon. Leave of absence granted October 20, 1883, extended three months. Paragraph 7, S. O. 266, A. G. O., November 20, 1883.

TOWN, F. L., major and surgeon. Until further orders, to perform the duties of Medical Director Department of the Columbia. G. O. 29, Department of the Columbia, November 8, 1883.

WILLIAMS, JOHN W., major and surgeon. Granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the Department. Paragraph 5, S. O. 157, Department of the Columbia, November 12, 1883.

APPEL, D. M., captain and assistant surgeon. Granted two month's leave of absence. S. O. 68, Division of the Atlantic, November 16, 1883.

MUNN, CURTIS E., captain and assistant surgeon. Assigned to duty at Fort Warren, Mass. Paragraph 4, S. O. 216, Department of the East, November 20, 1883.

WINNE, CHARLES K., captain and assistant surgeon. Relieved from duty at Fort Winfield Scott, California, and assigned to duty as post surgeon, Angel Island, California. Paragraph 1, S. O. 162, Department of California, November 14, 1883.

COCHRAN, J. J., first lieutenant and assistant surgeon. Assigned to duty at Fort Bayard, N. M. Paragraph 5, S. O. 236, Department of the Missouri, November 15, 1883.

RICHARD, CHARLES, first lieutenant and assistant surgeon. Relieved from duty at Fort Adams, R. I. Paragraph 3, S. O. 216, Department of the East, November 20, 1883.

WILSON, GEORGE F., first lieutenant and assistant surgeon. To report in person to Lieutenant Schwatka, 3d Cavalry, aide-camp, for temporary duty in connection with the completion of report of recent expedition to Alaska. Paragraph 3, S. O. 156, Department of the Columbia, November 9, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING NOVEMBER 24, 1883.

KENNEDY, STEPHEN D., medical inspector. Dismissed the service by sentence of a general court martial.

GYNECOLOGICAL SOCIETY OF BOSTON. — The next regular meeting of the Society will be held at the Medical Library Rooms, on the second Thursday of December, at four o'clock P. M. Remarks by H. A. Martin, M. D., on Listerism in Surgery. Post-mortem Specimen by J. G. Finkham, M. D.

HENRY M. FIELD, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Surgical Applied Anatomy. By Frederick Treves, F. R. C. S. Illustrated with sixty-one engravings. Henry C. Lea's Son & Co.: Philadelphia.

A Manual of Psychological Medicine and Allied Nervous Diseases. Containing the Description, Etiology, Diagnosis, Pathology, and Treatment of Insanity, with Special Reference to the Clinical Features of Mental Diseases, etc. Designed for the general practitioner of medicine. By Edward C. Mann, M. D., member of the New York Medico-Legal Society, etc. With photographic plates and other illustrations. Philadelphia: P. Blakiston, Son & Co. 1883.

Influence of Constant Use of High-Heeled French Shoes upon the Female Form, etc. By S. C. Bussey, M. D. Washington, D. C. Reprint from Volume VII. Gynecological Transactions. 1883.

An Examination of Some Controverted Points of the Physiology of Voice, especially the Register of the Singing Voice and the Falsetto. By T. Wesley Mills, M. A., M. D., L. R. C. P., London, etc. Read before the American Association for the Advancement of Science, at Montreal, August, 1882. Reprint,

Original Articles.

TWO CASES OF EXCESSIVE VOMITING OF PREGNANCY, ONE FATAL.

C. ELLERY STEDMAN, M. D.

I. A. B., twenty-four years old, a married woman, native of Nova Scotia, by trade a vest-maker, was brought to the City Hospital November 22, 1882. She could give no account of herself on which dependence could be placed, and her previous condition had to be guessed at. She had the general look of one prostrated at the end of a severe fever, being much emaciated, very weak, and utterly stupid. The whole skin was dry, rough, and scaling in small pieces, making every one who saw it say "ichthyosis." The tongue was moist, and coated with a white covering at the sides, red, and inclined to dryness at the tip. Examination of the chest gave a negative result. Palpation detected an abdominal tumor, rising from the pelvis, about the size of the uterus in the fourth month of pregnancy; and vaginal examination found the cervix shortened, softened, and slightly roughened, the os somewhat patulous. Temperature, 97° F.; pulse, 98, soft and weak. Nothing beyond a trace of albumen was found in the urine. She was put upon whiskey, and given all the milk and beef tea she could be induced to take, which was very little, as she had no inclination to eat. Quinia in moderate doses was the only drug given. She began to vomit soon after entrance, and the diet was changed to milk and lime water, without much benefit. She also had marked delusions, some of which related to her children. She was, however, childless.

Five days after entrance her husband was seen, from whom the following facts were obtained: There was nothing of importance in the family history. She had had no previous illness, so far as he knew. Her married life had been pleasant, the husband had steady employment, she had no care, and was perfectly well until six weeks before admission to the hospital, when she began to be troubled with vomiting, which had occurred nearly every day since. The physicians in attendance had diagnosed the vomiting of pregnancy, and she had had no fever that he knew of. She was in her right mind until two days before entrance. She recognized her husband, but said she had not seen him for three months.

By this time the vomiting had become so persistent that everything by the mouth was omitted, and she was fed by the rectum. For a day or two there was less vomiting, but the relief was only temporary. Another vaginal examination was made, when the cervix was found red and the os more patulous. The cervix was painted with Churchill's tincture of iodine. For a day or two there was no vomiting, except when beef tea was given by the mouth by mistake. Then the enemata were rejected, and after this she was fed on champagne and milk mixed with siphon soda, of which she retained what she took. There was progressive failure from the start, and death occurred two weeks from the date of admission. The temperature remained subnormal for the first few days, and lingered about the normal line until the day before death, when it reached 100° F. The next morning, an hour or two before the end, it rose to 106.5° F. The pulse was never above 130.

¹ Read before the Obstetrical Society of Boston, February 10, 1883.

At the autopsy, by Dr. Gannett, twenty-four hours after death, the uterus was found to reach within one centimetre of the umbilicus, measuring 17.5 centimetres in its long diameter (of which the cervix occupied 1.5 centimetres), twelve centimeters transversely, and six centimetres in thickness. The vaginal mucous membrane was dark red. The cervix contained a plug of thick mucus. The wall of the uterus was about five millimetres in diameter. The decidua vera and reflexa were well marked and easily separated from each other. Between them in certain places were soft, shreddy, opaque, yellow masses, which, under the microscope, were found to be made up of fatty detritus, with many cells of nearly complete fatty degeneration. An amnion was present, containing, by estimate, half a litre of clear fluid, inclosing a fœtus twenty-one centimetres in length, with a well-developed cord. The left ovary contained a corpus luteum, about one centimetre in diameter. The upper lobe of the right lung was dense, and, upon section, exhibited nodules of broncho-pneumonia, and the appearances of acute bronchitis and bronchiolitis. The heart was small. The aorta admitted only the finger, and had a thin and very elastic wall. The intercostal branches were irregularly distributed, and there were several superficial patches of degeneration in the intima. There was fatty infiltration of the liver.

When a writer with the experience of Burns makes the statement that he has "never known vomiting, purely dependent on pregnancy, end fatally;" and when a similar observation has been made by Désormeaux (Leishman), it can hardly be unnecessary to place this case on record. The autopsy showed no other cause of death than that given as the title of this paper; for the degeneration noticed in the placenta was doubtless the effect and not the cause of the vomiting and its concomitant depression, while the bronchial lesions were due to food inhaled when given in her semi-unconscious or dying condition. The painting of the os gave some relief for a day or two, and it seemed obvious to her attendant at the hospital, whose opinion was fortified by Dr. Lyman, that she was from her entrance altogether in too far advanced a state of exhaustion to permit of any operative procedure. Dr. Playfair says that he has had only once to evacuate the uterus to relieve symptoms dangerous to life from this cause. When the best methods of emptying the uterus, in the early months, for such an emergency, were inquired for in this Society at the last meeting, the questioner could elicit no reply from any who said they had much experience in the matter. It was uncertain in this case whether the patient's extreme depression was owing wholly to pregnancy, as she was unable to give any account of herself, and it was not till five days after her admission that her previous history was learned.

II. Mrs. C. D., a young woman in her second pregnancy, desired me to see her early in January. I attended her in her first confinement in January, 1881, when she had a specially easy and normal labor. She had suffered much in the early months of gestation from nausea, but not to an excessive extent. In October, 1882, she had from the 7th to the 21st trifling nausea, and the menstrual flow was more than usual. In November she was unwell from the 7th to the 12th. In December there was no flow, and nausea began on the 7th. On the 9th of January, 1883, I saw her, when she had been vomiting a great deal for some days, had

suffered from insomnia, and looked thin and haggard; still she kept down some portion of food. But after this the enemata of chloral had procured better nights, the emesis grew more persistent, till, by the 14th, when I visited her, the remedies prescribed had lost effect, and she was in an alarming condition; every particle of nutriment had been rejected for forty-eight hours; there was headache, fleeting delirium, a pinched countenance, dry brown tongue, fetid breath, constant nausea, and little sleep, immediate ejection of everything swallowed, epigastric and abdominal pain, and a rapid thready pulse. I saw that if speedy improvement did not follow, the uterus would have to be at once evacuated, before her exhaustion went too far. First, however, by means of a bivalve speculum (Higbee's) I exposed the cervix; it was flexed, very soft; the os was patulous, and very red. To this I applied liberally, with a camel's hair brush, the ethereal tincture of iodine. This caused no inconsiderable smarting; she was able to taste the medicament, and her breath smelt of it; the nausea continued through the night, and the next day, proper restrictions not having been enjoined regarding visitors, she saw several friends and talked with them at length, so that fatigue, nausea, and vomiting continued; but this disturbance being stopped, the vomiting also ceased, and since the twenty-fourth hour after the application of iodine to the os she vomited only twice, once, a week later, on account of fatigue following a troublesome enema, and once more about six days further on, when she took too rich food. On the second day after the application she was fed on milk and lime water and champagne; in a few days she drank three pints of milk daily, besides a pint of champagne, and gradually other articles of food were added as she improved. In a week she sat up, and in a fortnight after her symptoms of great danger my attendance ceased for the present.

I think that the improvement in this case may fairly be owed to the treatment adopted, and not viewed as one of the *post hoc, propter hoc* examples. In my experience considerable nausea seldom, if ever, gives way before the end of the third month, whereas this young lady had not more than completed the eighth week. She could not have gone on with the symptoms she presented on the 14th January without, in a few days, the question becoming one of life and death; and I feel that my estimation of the cause of improvement is not erroneous. I have done this little operation now four times: once uselessly, in the case reported above, and thrice in other cases, none of them so severe as Mrs. C. D.'s, and in each of these three cases the treatment was effective. It was taught me by the late Dr. E. D. Miller, of Dorchester, who said that he never knew it to be successful unless the patient complained of smarting. I do not suppose it makes much difference what form of caustic or vesicant is used, so long as the requisite impression is made on the cervix. In this case the os was abraded; in all the others, if my memory about them is good, the mucous membrane was sound. Nor can I remember that there was any displacement or flexion in any case. Of course a limited acquaintance with obstetric literature shows that Bennett and others have pointed out the benefit—many years ago—of similar treatment of the os uteri; but it does not seem to me to have been in general use. I think, however, that many women may thus be greatly relieved of troublesome vomiting when it does not promise to go on to an alarming degree, that it is safer

than other methods, particularly Copeman's, and that it is worth trying in every case of intractable vomiting.

A CASE OF TUBAL GESTATION, WITH RUPTURE AND SUDDEN DEATH.¹

BY D. D. GILBERT, M. D.

On the 18th of last month, January, 1883, there occurred in my practice a sudden death. The subject was a lady aged twenty-one years and seven months. She was of fine personal appearance, apparently of perfect physical development, and of rather brilliant mental endowment. The only noticed symptom of physical weakness had been a somewhat persistent, though slight, cough, during the last few years.

About two years ago she was married, and in May following was the subject of a procured abortion of a three months' pregnancy. The sickness connected with this was, I am told, quite severe, and reduced her strength so much that the invigorating influence of a residence at the sea-side during the warm weather was considered desirable. This was obtained at Nantasket, but the emanations there from an inland pond of stagnant water, "Green pond" so-called, I believe, prostrated both her and her husband with an attack of typhoid fever. Her sickness, during which I had the care of her, was severe and protracted, but she finally made a good recovery, and, during the last year, enjoyed what seemed perfect health, with the exception of severe abdominal cramps attending the onset of menstruation. The occurrence of these cramps dated from the miscarriage, nearly two years ago, and were said to grow more severe at each period, although she never sought professional aid for their relief. At her last menstruation, the pains were so severe, she said she did not think she could live through another such attack. This occurred November 23, 1882, and about December 23d, one month later, the cramps again attacked her, but not as severely, and did not usher in the menstrual flow. Again, about January 1st, the cramps recurred, but no menstruation followed.

She had been accustomed to use a privy in a cold out-building, and it was to this exposure that the menstrual suppression was attributed, although she, having regretted her former course, fondly hoped that the cessation of menstruation meant pregnancy. This, however, was the only thing which could be construed into a symptom of such condition. There was no morning sickness, nor was there any change noticed in the breasts. In her former pregnancy morning sickness had been present. In the forenoon of January 17th she felt as well as ever in her life, and at about two P. M. performed the act of defecation in the cold privy referred to. Immediately upon her return into the house she sank into a chair, saying "Those awful cramps are coming again and I know I cannot live through them."

The exposure to cold was again blamed as the cause, and she was helped up-stairs, put to bed, and the usual remedies resorted to. While getting up-stairs and to bed, although she did not at any time completely faint, several faint turns came over her. Relief not being obtained as usual, but the pain becoming more severe instead, I was sent for. I being unable to attend that day, Dr. C. E. Stedman kindly visited her for me. He examined her externally as well as the abdominal sore-

¹ Read before the Boston Obstetrical Society, February 10, 1883.

ness would permit, and per vaginam. He found a firm elongated cervix with closed os, and no tangible evidence of any accumulation (like hæmatocele) behind the vaginal cul-de-sac. He bade her friends cease undue anxiety, pronounced no evidences of pregnancy present, administered an opiate, and expressed the opinion that menstruation would appear and she would get relief. By midnight a slight show had made its appearance, and the patient was so much relieved as to get several hours' sleep between that time and morning when I called upon her. Upon my looking at her I was at once struck with the extreme pallor of her countenance, and when the napkin removed from her was shown to me, stained with less than one half ounce of blood, I said to her "You don't make much show for your looks; you look as though you had lost a quart of blood." I proceeded to examine the case, and could get no history of any special collapse, but rather of a persistent and severe attack of the cramps *which she had so often had, preceding and relieved by menstruation*. The thermometer showed a record of only 100.4° F; the pulse was rather weak, but not thready at 96. There had been no vomiting until some hours after morphine had been taken, and then was only occasional. The crampy pain was not as severe, but there was great tenderness complained of over the whole lower part of the abdomen; so marked was this that only the most delicate palpation was considered prudent. There was no swelling or tympanites. The patient said that although she felt somewhat relieved, yet there was a constant heavy pain in the abdomen, especially to the right and superior to the uterus, and she felt as though her bowels were swollen. Per vaginam, the uterus was prolapsed so that the os rested upon the perineum, but was not especially tender, nor did it seem to be enlarged or laterally displaced. The cervix was firm and rather long, with an ordinarily closed os. The vaginal cul-de-sacs, on either side of the cervix, were not compressed, and no swelling could be felt, by gentle examination, on either side. I was impressed by the prolapsed condition of the uterus, but as I had never made any previous examination I supposed it might be her usual condition.

I felt satisfied that there was no threatening miscarriage, and that she was not pregnant. I could get no satisfactory evidence of the tumor of hæmatocele, and was convinced that the case was one of delayed menstruation with congested ovaries. With regard to the subjective symptoms, I considered that they were hysterically exaggerated, for the temperature and pulse did not seem to agree with any serious organic lesion, and during her sickness in typhoid fever the patient had manifested marked tendency to such exaggeration, arousing the whole household on several occasions with the conviction that she was dying, and when I had been sent for being relieved simply by my assurance that there was no cause for alarm. In accordance with such an opinion I left the same comforting assurance as Dr. Stedman had done, that with patience the menstrual flow would appear, and she would be relieved.

At half-past three P. M. I was again sent for, and learned that she had been fairly comfortable since my morning visit, and had turned from side to side, but rested better upon the back. The temperature had fallen from 100.4° F. in the morning to 99.6° F., and the pulse remained about the same both as to volume and rate. No show had made its appearance, but the

crampy pains had returned. I repeated the vaginal examination, and found no apparent change. So confident did I feel that the uterus was empty that I gently introduced the sound to verify my diagnosis, and, perhaps, induce the menstrual flow. The uterus easily admitted the sound two and one half inches. Upon gentle percussion of the abdomen finding some dullness and possible fullness in the supra-pubic region, and learning that only about one ounce of water had been passed since the commencement of the attack, I thought, perhaps, a distended bladder might be the cause of the aggravated condition of affairs. I passed the catheter only to find the bladder empty and firmly contracted. I could get no satisfactory evidence of a hæmatocele, and the constitutional symptoms did not seem to warrant the supposition of abdominal hæmorrhage, for there was no collapse, and only so much vomiting as the opium taken or the ovarian congestion might account for. Once more I was forced to the conviction that it was merely one of those troublesome cases of delayed menstruation with ovarian congestion and hysterically exaggerated reflex symptoms. I then gave one sixth grain of morph. sulph. hypodermically at half-past four P. M., and waited until six o'clock, when I left the patient partially comfortable, but rather wishing for more opiate.

At half-past seven P. M., one and one half hours after I left her, and twenty-nine and one half hours after the first attack, she died, having been unconscious for one hour, and supposed to be sleeping from the opiate.

When I arrived at the house I was immediately confronted with the statement that my patient had sunk under an overdose of morphine. This seems to be the first idea that seizes upon the friends in every case of sudden death where morphine has been administered, and is a cogent reason why an autopsy should be insisted upon in all such cases. Of course I demurred at any such conclusion, as I had left my patient conscious one and a half hours after the administration of only one sixth grain of morph. sulph., and stated my belief that the cause of death had been internal hæmorrhage, comparatively slight at the first attack, and suddenly more copious within the time since I had left her, one and one half hours before her death. I said I could not tell what was the cause of the hæmorrhage, but suggested the possibility of tubal gestation and rupture. Afterwards in consultation with Dr. Stedman we decided that such was probably the case, and the autopsy so proved. I will relate the report of the autopsy later, but would now crave your indulgence for a moment. I have thus gone into the details of this case because in the opportunity afforded me of bringing it to the notice of this learned Society I seek for light in other parallel, or apparently parallel, cases. Dr. Thomas, in his work on Diseases of Women, says it is much easier in the lecture room or in the written treatise to lay down the distinction in these cases than it is to distinguish them at the bedside. So I admit that with the light afforded by the result it is quite easy to make a very probable diagnosis, but how, I would ask, in the early history of such a case could one find sufficient evidence of the real condition to justify the serious operative interference from which alone benefit could be hoped for? Dr. Thomas, in discussing the question of laparotomy for such cases, writes that of seventeen cases which he had seen, in one only had he been convinced of the diagnosis and

of the advisability of operating, and then he had been overruled on both points by a strong consultation.

Allow me to recapitulate. The only evidence of pregnancy was three weeks' delay of menstruation. Authorities state that in cases of extra-uterine gestation, "it is universally admitted that the uterus undergoes sympathetic engorgement, the cervix softens, and decidua membrane forms." In this case the testimony of both Dr. Stedman and myself is that the cervix was long and firm. Of the formation of decidua we had no means of judging. There had been no morning sickness. It is also stated that in tubal pregnancy the rupture is generally determined by some accidental circumstance between the fourth and twelfth week, rarely later. In this case, to be sure, the onset was sudden and followed the act of defecation, in the eighth week since last menstruation, but similar attacks of intense abdominal pain had been the accustomed precursors of the menstrual flow.

The countenance is said to be deadly pale. Such was the appearance in the present case, but there was not "the thready almost imperceptible pulse" usually found in such cases, and how many of us have not witnessed a deadly pale countenance in the subjects of intense abdominal pain at the inception of menstruation. Only two days after the occurrence of this death I was called to a simple case of delayed menstruation which presented these very features.

We are also told that accompanying rupture "there is perhaps vomiting," and that "the mental faculties remain clear." Such were the conditions in our case, but how does *this* differ from what is frequently seen in dysmenorrhœa?

After rupture, a few drops of blood are said to escape from the uterus, as in this case. But, again, how frequently the same thing occurs in dysmenorrhœa, and then ceases for a while before the flow becomes established.

Playfair sums up by saying that "too often death occurs without the slightest suspicion of its cause."

Again, gentlemen, let me ask you, can you throw any light upon the means of diagnosis, and, if the diagnosis is satisfactorily made out, what is the best course to pursue, either before or after rupture?

The autopsy presented nothing unusual beyond the accidental condition, except the caseous degeneration of the bronchial glands, and the studding of the external coat of the intestines with myriads of minute miliary tubercles. Upon opening the abdomen, liquid blood was found filling all the interstices between the intestines, and the pelvic cavity was completely filled with clotted blood. The clot was found to be firmer around the right ovary and extremity of the right Fallopian tube, which was completely encased with a still firmer clot. By carefully removing this, little by little, the tumor was found in the outer third of the tube, of ovoid shape, about one and a half inches long by three fourths inch in diameter. Upon incising the tube over it, the congested villi of the chorion were beautifully exposed, and, upon opening the sac, a seven weeks' fetus was seen snugly stowed away. The point of rupture seemed to have been where the funis was attached, and where the placenta would have formed, rupture having taken place, as usual in such cases, before the formation of the placenta. The Fallopian tube was found to be impervious from the site of the cyst to the uterus. This is stated by some authorities as one of the causes of

ectopic gestation, but Playfair says it is probably induced by the abnormal gestation.

Among the causes laid down are old adhesions or bands constricting the tube. None such were found at the autopsy, but adhesion bands were found connected with the ovaries, and may have been the cause of the severe pain accompanying menstruation. As these pains dated from the miscarriage, two years previous, perhaps it is reasonable to presume that the adhesion bands were the result of the inflammation accompanying that process.

The interior of the uterus showed a marked decidua membrane, and the right ovary clearly showed the recent corpus luteum of pregnancy, thus corresponding with the tube in which the fetus was found. One case is on record where the recent corpus luteum was found in the ovary of the opposite side from the tubal pregnancy, while the corresponding ovary furnished none.

A PEDICULATED TUMOR OF THE ANTERIOR LIP OF THE CERVIX UTERI.¹

BY EDWARD T. WILLIAMS, M. D.

THE tumor here shown possesses interest only from the diagnostic peculiarities of the case in which it oc-

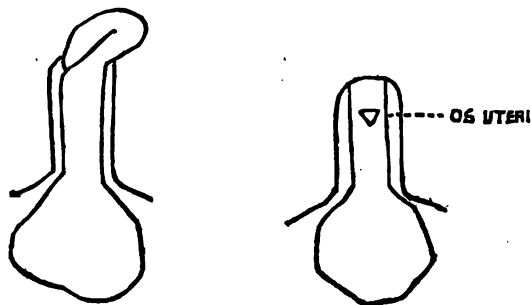


Diagram representing uterus with tumor attached. Side view.

Diagram representing tumor and pedicle, rear view, showing os uteri.

curred. I was called to it in consultation by Drs. O'Connell and Meeuen, of Roxbury, January 24, 1880. The patient, a woman of about thirty-five years, married, but without children, had been suffering for fourteen months with profuse menstruation and a white, at times fetid, discharge. Sexual intercourse had been regularly indulged in and was not painful, though the husband had complained of some obstacle in connection. The night before the medical consultation she had been taken with bearing-down pains, followed by the protrusion of a solid body from the vulva.

The body as I saw it was about the size of a large apple. It was red in color, and had a firm, fleshy feel. In shape it was round, somewhat knobby, insensitive to the touch, and having a smooth, mucous surface. It grew from a stalk one and a half inches in diameter, four inches in length, perfectly round and smooth, and as it seemed springing directly from the roof of the vagina. It was suggested by one of the gentlemen present that it might be an inversion, but this was negatived by its pediculated shape and the absence of any history of pregnancy. The question was, if it was a polypus, where was the *os uteri*? On the first examination no traces of the *os* could be found, the pedicle seeming to grow directly from the vaginal roof, the

¹ Read before the Norfolk District Society, January 9, 1883.

finger passing to the bottom of the *cul-de-sac* on all sides, and no os!

The patient being etherized and a finger inserted into the rectum, the tumor at the same time being drawn down, the body of the uterus was plainly felt in its natural position. Again, with the finger in the rectum and the hand over the pubes, the tumor being pushed up by a third party, the fundus uteri was clearly felt. A catheter in the bladder confirmed the fact still farther. This led to a more careful examination of the pedicle of the tumor, when, passing my finger carefully over its surface, I discovered on its posterior aspect about an inch from its upper end a small triangular depression, base upwards, about large enough to contain a split pea. On pushing the point of a sound into this depression I was heartily pleased to find it enter, proving it to be the os uteri. The sound passed upwards without obstruction to the depth of two and a quarter inches. The tumor was simply a prolongation with hypertrophy of the anterior lip of the cervix.

The diagnosis being established the treatment was clear. The pedicle was divided high up by Dr. Mecuen with the *écraseur*. There was no hæmorrhage, and examination less than a fortnight after showed nothing further than a certain thickening and slight elongation of the anterior lip.

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

EYE SYMPTOMS IN SPINAL DISEASE.

In a discussion on this subject in the Ophthalmological Society of the United Kingdom,¹ Dr. Gowers called attention to two classes of symptoms, optic nerve atrophy and intra-ocular palsies. Two general facts deserved mention at the outset. First, that these symptoms are associations and not effects of the spinal lesion. The evidence of this is, that disease of the cord of any nature may exist, in any degree, in any part, without the occurrence of these symptoms (if we except the rare paralysis of the dilators of the pupil in disease of the sympathetic tract in the cervical region of the cord); that the ocular symptoms, which may be absent when the cord disease is advanced, may exist in extreme degree when such disease is in an early stage; and that, with the exception of the sympathetic symptoms just mentioned, we know of no anatomical connection or functional mechanism by which the disease of the cord can produce the ocular symptoms. Secondly, that the ocular symptoms result from degenerative processes, and their presence shows that the cord disease is also degenerative, an indication of extreme value in cases in which acute processes mask the underlying degeneration.

Optic nerve atrophy is chiefly associated with locomotor ataxy; in other spinal diseases it is rare. As long as ataxy was believed to be a disease confined to the posterior columns of the spinal cord the concurrence of a peripheral degeneration in the optic nerve was an anomaly; but recent researches, chiefly of Pierret (confirmed in part by Déjerine), have demonstrated the frequency of degeneration in the peripheral cutaneous nerves, and its occasional occurrence in the optic centres, and our conception of the disease is thus enlarged from a mere affection of the spinal cord to a

wide sensory neurosis in which optic nerve atrophy falls into a definite place. But as the peripheral, spinal, and central optic changes cannot yet be detected during life, we must confine our clinical study to associations which can be recognized.

What proportion of cases are tabetic? or, putting the question practically, In what proportion is there neither absence of knee-jerk nor lightning pains, the two earliest symptoms? The question can only be answered by ophthalmic surgeons. If spinal symptoms are altogether absent at the time of examination we are not justified in assuming that they will occur later.

It is more difficult still to determine in what proportion of cases of tabes atrophy occurs, because the spinal and ocular symptoms tend to separate the patients. Probably the proportion does not exceed fifteen per cent. Dividing the course of tabes into three stages, (1) before affection of gait, (2) while the patient can still walk, (3) when he cannot walk except with the aid of another person, it is found that atrophy begins twice as frequently in the first stage as in the second, and very rarely in the third, and a combination of the observations of ophthalmic surgeons and of physicians would probably show the excess in the first stage to be still larger. Not only does atrophy commence, but it advances rapidly in the first stage, while the spinal symptoms often remain stationary; coming on in the later stages of the disease it often has a less progressive character.

The symptoms of the optic atrophy present more diversity than is generally admitted. While color-vision is often impaired early the field for white does not always contract before central vision fails. It may be unrestricted when there is considerable loss of acuity. The affection of sight probably varies in character just as does the impairment of sensation in the legs. Irregular defects in the fields bear upon the question of localizing the degeneration; initial temporal hemiopia has been twice observed, loss of the lower nasal quadrants once, the former suggesting that the chief lesion was at the chiasma. The occurrence of amblyopia without change in the optic disk bears upon the same question; in one case acuity was reduced to one tenth without any visible change in the disk. Rapid increase in the failure of sight is sometimes met with just as is sudden increase in the spinal symptoms. Is this attended with any variation in the appearance of the disk? Some disks are clear and excavated, others are occupied by a soft, gelatinous-looking tissue. Does any difference in course correspond with this difference in aspect? In one case with rapid failure the gray tissue in the disk was very abundant.

In other spinal diseases optic atrophy is very rare; it is occasionally seen in insular sclerosis, less frequently in lateral sclerosis, never in progressive muscular atrophy or myelitis. Probably this is due to the fact that these affect chiefly the motor, tabes the sensory, tracts. In general paralysis of the insane, which, though not strictly speaking a disease of the spinal cord, is often attended with spinal changes, atrophy is more common.

Intra-ocular paralysis comprises the second group of symptoms. Accommodation, associated contraction of the pupil, light-reflex contraction, and skin-reflex dilatation are all subserved by centres lying beneath the aqueduct of Sylvius; the path of the last is circuitous, comprehending the cervical part of the spinal cord and the cervical sympathetic. Like atrophy, the intra-ocu-

¹ Ophthalmic Review, July, 1883.

lar palsies are as common in tabes as they are rare in other diseases of the spinal cord. Loss of the light-reflex alone is most common, then total paralysis, and then palsy of accommodation without loss of the light-reflex. Among seventy-two cases of primary degenerative ataxy there was some defect of the intra-ocular muscles in sixty-six. Light-reflex alone was lost in forty-eight and impaired in seven, that is, lost in two thirds, and affected in three fourths, of the cases. In the remaining eleven cases the pupil did not contract on an effort at accommodation, and in most of these accommodation was also lost. The percentage of cases representing intra-ocular palsies was, in the first stage of tabes, eighty-four; in the second ninety-three; in the third one hundred. Thus the symptoms usually begin early, but there is a manifest tendency for the cases which escape at first to suffer later on. As a rule there is no correspondence between the pupil symptoms (size, inequality, or irregularity) and the spinal symptoms, but in one case of tabes the pupil was smaller on one side, and on this there was unilateral sweating of head and face, probably from sympathetic paralysis. The reflex dilatation on stimulation of the skin (to the loss of which when the light-reflex is lost Erb has called attention) cannot with all care be invariably obtained in persons beyond middle age. Though usually lost with the light-reflex it sometimes persists, especially when the pupils are large.

Intra-ocular palsies are excessively rare in other diseases of the spinal cord, with the exception of general paralysis of the insane. The instances of this disease which come among hospital out-patients present slighter mental changes and a less progressive course than the asylum cases. In them the impairment of the intra-ocular muscles (usually loss of the light-reflex) is almost as frequent as in tabes, being present in two thirds of the cases. Intra-ocular palsies may occur without spinal disease, and are often preceded by constitutional syphilis, as Mr. Hutchinson has shown in the case of ophthalmoplegia interna. Of fifteen such cases there was a history of constitutional syphilis in seven, — a fact of considerable interest in connection with the frequency of the symptom in tabes and the disputed relation of syphilis to the latter disease. The pupil symptoms are doubtless in these cases due to a degenerative process, but we are as little justified in denying as we should be in affirming their relation to syphilis.

Dr. Hughlings-Jackson dwelt on the variety and complexity of symptoms in tabes dorsalis — joint affections, gastric crises, several very different affections of the eyes, bladder symptoms, etc. Of the so-called typical symptoms one or more may be absent; ataxy is often absent; with ataxy the knee-jerks may be present. In one case of seventeen years' duration the Argyll-Robertson symptom was not found. Some of the so-called typical symptoms occur in other diseases. The commonest pupil symptom occurs in some cases of general paresis. Knee-jerk is absent in many morbid conditions, for example, diphtherial paralysis, a disease which, superficially regarded, has sometimes a great likeness to locomotor ataxy. There are degrees of some, at least, of the symptoms; thus, no ataxy, degrees of ataxy, and, so to speak, a degree beyond ataxy, an inability to walk at all. If there are not degrees of pupillary conditions there are various such conditions. The width of the symptomatology is exceedingly different in different cases. There may be

the Argyll-Robertson phenomenon with no other definite nervous symptoms, and when so the nature of the case, beyond, perhaps, the vague diagnosis of nerve degeneration, cannot be determined. A case of tabes without ataxy may present a far wider symptomatology than one with ataxy.

Though eye symptoms are common with disease of the cord, they are unknown with lesion of the cord except when it occurs in the cilio-spinal region, as, for example, in a section of half the cord from a stab with a knife (contraction of pupil on the same side and narrowing of the ocular aperture).

The Argyll-Robertson pupil is found not only when sight is slightly impaired, but also when there is only bare perception of light; in one case he found it when the loss of sight was absolute. The pupils enlarge when the patient "makes believe" to look at the clouds, and contract when he "makes believe" to look at his fingers held near him. On the other hand, with considerable impairment of sight the pupils may remain contractile to light. He mentioned cases to illustrate the varying width of association of optic atrophy with other tabetic symptoms.

Cases were cited of double optic neuritis with absent knee-jerks. In one of these there was tumor of the left cerebral hemisphere, but no morbid changes were discovered in the spinal cord. He had seen double optic neuritis with absent knee-jerks, and no, or at any rate no other, localizing symptom.

He had said that diphtherial paralysis was owing to a morbid affection of the sympathetic system; he ought to have said that the ocular, the palatal, and the rarer circulatory symptoms (great slowness of pulse) are morbid affections of parts supplied through ganglia of the sympathetic; he believed the spinal cord, as well as higher parts of the nervous system, to be morbidly affected in this disease. He had not seen a case of so-called diphtherial amaurosis in a stage where the paralysis of the ciliary muscle was complete.

He also cited cases illustrating the various intra-ocular palsies met with in tabes.

Mr. Bevan Lewis, from systematic examination of a large number of cases of general paralysis of the insane, was led to the conclusion that ocular symptoms occurred in the majority. The sequence of morbid phenomena occurring in the iris in this disease appeared to be this: That there is, first of all, loss of reflex dilatation to cutaneous stimulation; next, the action to light is lost; and in the final stage, paralysis of both iris and ciliary muscle is developed, and becomes in the end complete.

Dr. Savage believed that the examination of the optic disk would increase our knowledge of general paralysis of the insane. In recent years he had come to appreciate certain changes occurring in the disks, not of all, but of a considerable number of patients suffering from general paralysis. In one class tabetic symptoms were prominent, and sometimes preceded the other symptoms by many years; in these cases changes in the disk were common; he had, however, only recently learned that these changes were not confined to the patients who presented tabetic symptoms, but that they occurred also in those who presented symptoms of lateral sclerosis. The question arose whether this lateral sclerosis was secondary to degeneration of the motor tracts in the brain. It was now generally recognized that "general paralysis" is a wide term, embracing a number of separable conditions; in

making this subdivision, a careful attention to alterations in the optic disks and in the reflex phenomena would be of great assistance.

Dr. Sharkey narrated three cases of atrophy of the optic disks with symptoms of disseminated sclerosis. In one of these there had been previously optic neuritis.

Mr. Nettleship said that there were clinical reasons for believing that optic nerve changes in locomotor ataxy begin at the disk, not in the trunk of the nerve or optic tract; he had seen no unequivocal cases of spinal disease, in which sight failed before ophthalmoscopic changes became apparent, whilst it was commonly observed, on the other hand, that the appearances of atrophy are more pronounced than the condition of the sight would lead us to expect. Of seventy-two patients under his care with progressive atrophy of the optic nerves, thirty-six were undoubtedly tabetic, eight had symptoms of mixed spinal and cerebral disease (allied to general paralysis), seven had some other forms of chronic spinal disease, not ataxy, eight had, besides optic atrophy, reflex irido-plegia ("spinal pupils"), but no other symptoms of disease of cord or brain; in the remaining thirteen there was no proof of disease of the nervous system, but in some of these the notes were incomplete. He had been struck with the rarity of the complete absence of spinal symptoms in progressive atrophy. Alluding to the mode of failure of vision in progressive atrophy, he pointed out that the field of vision is often invaded in a precisely symmetrical manner in the two eyes, although at any given time one eye is usually worse than the other. He had only seen two or three cases in which one eye became quite blind before the other began to fail.

Dr. Gowers, in closing, said the knee-jerk was very seldom absent in health. He had formerly recorded a few cases, but he had not since met with a single instance, and was, therefore, inclined to doubt the accuracy of his earlier observations. In testing the pupil for the light-reaction there were several fallacies to be guarded against. If artificial light were used, it was especially necessary to see that the patient did not accommodate for the source of light. It was necessary to remember that in disseminated sclerosis sight might be lost, owing to a patch of sclerosis in the optic nerve, without any primary atrophy of the disk.

UNILATERAL RETINITIS ALBUMINURA IN A PATIENT WITH BUT ONE KIDNEY.

Yver¹ reports the following rare case in a Spaniard, aged forty-three, who had had most of the subjective and objective symptoms of parenchymatous nephritis, and in whom the right eye remained absolutely intact throughout the entire course of the disease. In the left eye there were the usual yellowish-white masses of exudation in the retina, beneath the vessels in the region of the macula, and between the latter and the disk. There were numerous punctate hæmorrhages, and some larger extravasations. Vision was not much affected when the patient first came under observation, but subsequently was almost entirely lost. After he had been under treatment about six weeks, the vision improved almost to the normal standard, and there was a considerable diminution of the retinal exudation. He subsequently, however, grew very much worse, the vision was again nearly lost, and the patient died in

about ten weeks from the time he first came under observation. At the autopsy the right kidney was found to be entirely absent, there being not a trace of kidney, artery, vein, or ureter, though the suprarenal capsule was present in its accustomed place, and was of normal size. The place ordinarily filled by the kidney was occupied by a portion of the right lobe of the liver, enormously hypertrophied. The left kidney was in its normal position, was considerably hypertrophied, and presented the characteristics of the large, white, parenchymatous nephritis.

PERIODICAL RECURRENT PARALYSIS OF THE MOTOR OCULI.

Hasner² describes the case of a girl of seventeen years, who, since her thirteenth year, with each recurrence of the catamenia, suffered from paralysis of the oculo-motor nerve of the left eye. The affection began with headache and vomiting. While the paralysis lasted the eye was slightly prominent and deviated outward and a little downward. It could be moved inward as far as the median line, but only with secondary deviation outward of the right eye. By the second day headache and vomiting had ceased, and the paralysis of the levator of the lid was already less. The third day, when the menstrual flow stopped, the movements of both lid and eye became again free, though there was still slight secondary deviation of the right eye, and mydriasis persisted. The mydriasis, indeed, did not wholly disappear at the end of a week.

Hasner thinks it probable that here, accompanying menstruation, there is vaso-motor irritation in the region of the fissure of Sylvius and the pedunculus, which causes periodically pressure paralysis of the nucleus of origin, of the root district, of the left motor oculi, with reflex action on the vagus. Hence, periodically, muscular energy is much diminished, but returns immediately when the circulation again becomes normal. The combination of the symptoms suggests that the hyperæmia is greatest at the anterior end of the nucleus, spreads from there toward its posterior parts, and recedes in the reverse direction. There is the possibility that if the phenomena recur for a long time a permanent paralysis of the motor oculi may result either through inflammatory process or from the gradual development of a tumor.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

FEBRUARY 10, 1883.

A FATAL CASE OF TUBAL PREGNANCY, WITH OBSCURE DIAGNOSTIC SYMPTOMS. AUTOPSY.

DR. D. D. GILBERT, of Dorchester, read the case.³

DR. LYMAN said that the interesting point in the case reported was as to diagnosis between rupture caused by tubal pregnancy and hæmatocele. From the history in this case he did not see why the diagnosis of hæmatocele was not the natural inference. In fact, it was a case of hæmatocele originating in a rupture of the fetal sac. The only case of tubal preg-

¹ Recueil d'Ophthalmologie. March, 1883. N. Y. Medical Journal, July 14, 1883.

² Prager med. Wochenschrift, November 10, 1883.

³ See page 530 of this number of the JOURNAL.

nancy which had occurred in his own practice exhibited the same symptoms, but in a more exaggerated form, with an antecedent history which left no doubt of the correct diagnosis. The rupture took place at about the sixth week of recognized pregnancy; there were sudden hæmorrhage, with violent pain, and an immediate tendency to collapse, and these symptoms following a jump from her bed to the floor. Dr. Lyman asked Dr. Gilbert if he supposed that the rupture took place at the time of the earlier pains.

DR. GILBERT replied that there were no indications of rupture at the time of the earlier pains. His theory was that the hæmorrhage was slight at first, but that it began with the last of the abdominal cramps.

DR. HOMANS contrasted the case of Dr. Lyman with that of Dr. Gilbert, and said that in the report of the latter he could see nothing on which to found a diagnosis of tubal pregnancy.

DR. E. G. CUTLER stated, in answer to a question by Dr. Lyman, that he had never seen a case of tubal pregnancy in which a uterine decidua membrane had not been formed.

On motion of DR. BROWN it was voted that the thanks of the Society be presented to Dr. Gilbert for his interesting paper, and that a copy be requested for publication with the records of the Society.

THE "LONGINGS" OF PREGNANCY.

DR. FORSTER remarked that he was surprised to find that Lusk, in his *Midwifery*, observes: "The consuming desire for unwonted articles of food, which is customarily termed 'longings,' I have never yet witnessed, and am tempted to regard as, in a measure, mythical." He therefore reported the case of Mrs. T., who had an uncontrollable desire for uncooked starch. Mrs. T., thirty-eight years of age, was married when fifteen years of age, and fifteen months later gave birth to her first child. She has since been delivered of six living children, and had two miscarriages. When about three months pregnant with her sixth child, who was born November, 1867, she commenced to eat dry corn starch, at first only in small quantities, but at the time of confinement she was using four one pound packages a week. After delivery she gave up corn starch for common starch, the use of which she continues to the present time. The daily amount varies, the better she is the more she eats. Her general health has been fair, and has not suffered from any intestinal disturbance excepting slight irregularity of the bowels.

DR. WILLIS, of Waltham, mentioned the case of a pregnant woman who ate writing paper.

TWO CASES [ONE FATAL] OF EXCESSIVE VOMITING IN PREGNANCY.

DR. C. ELLERY STEDMAN read the cases.¹

DR. J. STEDMAN stated that he had tried the method of painting the cervix with tincture of iodine with good result in three cases of this condition, and with partial relief in several other cases.

DR. FORSTER remarked that after a case of placenta prævia (which he would report later in full) he had been obliged to inject subcutaneously ergot, brandy, and quinine in different places, and that now over a month had elapsed, and the ulcers caused by the ergot and brandy had but just healed, while that caused by the quinine was quiescent until about a week ago, when the eschar fell, leaving an excavated ulcer about

one half an inch in depth, which is slowly healing under disinfecting washes and iodoform.

DR. C. ELLERY STEDMAN remarked that it was his custom to inject all irritant solutions vertically and deep into the flesh in order to avoid inflammations and abscesses.

DR. TOWNSEND, of Natick, said that on a hot day in June, three years ago, he was called to assist in the delivery of a woman with a figure-of-eight pelvis. Many attempts had been already made, and the patient was apparently moribund. He performed craniotomy, and effected delivery, and during the process two gentlemen plied the patient continually with hypodermic injections, consuming in this way the enormous amounts of *not less than* —

Whiskey	3 vi.
Ether sulphuric	3 i.
Camphor	℥vi.
Ergot fluid extract	3 ss.

The syringe was introduced as soon as pulse flagged. In four days less than a year afterwards the patient was again confined at term, and Dr. Townsend was again sent for to assist. Meanwhile an arm had come down, and Dr. Townsend turned and easily delivered the patient of a living child.

DR. HOMANS alluded to the case of a patient who went into collapse after confinement. Morphine, brandy, and tincture of digitalis were freely and repeatedly administered hypodermically, and the patient recovered, without abscesses. The injections were made just beneath the skin.

DR. RICHARDSON observed that Dr. Townsend's case was interesting, as showing the great advantage of doing version in preference to attempting to deliver with forceps in the case of a figure-of-eight pelvis.

DR. WILLIS, of Waltham, remarked that the shock that he had observed in cases of placenta prævia was greater than one would expect from the loss of blood or other circumstance. He had seen fatal instances when these could hardly account for the result.

DR. C. E. STEDMAN had seen fatal cases in which the hæmorrhage had been well under control and everything had gone on well as regards the process of delivery, etc.; a result which in one case at least was probably due to pulmonary embolism.

ANATOMICAL SPECIMEN. RETAINED PLACENTA.

DR. HOSMER exhibited the specimen, and gave the following account of the case: —

The only point of interest attaching to the specimen was the fact that a placental mass was retained nearly ten weeks after a premature birth which occurred about the middle of a second pregnancy, and was then expelled in a state of perfect preservation and without any putrefactive change.

FÆTAL CALF WITH A FIFTH LIMB GROWING FROM ITS BACK.

DR. HOSMER exhibited the specimen.

DR. W. F. WHITNEY's description of the specimen is as follows: —

It was about eight to ten inches in length, and apparently somewhat macerated. From the lower part of the dorsal region was apparently a fifth leg, poorly developed, and without any large amount of bony material. The hoof was represented by three parts instead of two, and from this it was suggested that the leg was possibly double. From the condition of the specimen

¹ See page 529.

this could not be determined. Otherwise the animal appeared well formed. Internal organs not examined.

A SELF-RETAINING SIMS' SPECULUM.

DR. FORSTER exhibited to the Society a self-retaining Sims' speculum invented by Dr. Hunter, of New York, and described in a recent number of the *New York Medical Record*, which he had recently obtained, and had answered in his practice every requirement, and dispensed entirely with the necessity of an assistant.

DR. BOARDMAN had also used the speculum at his clinic at the City Hospital.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

OCTOBER 1, 1883.

DR. J. B. SWIFT reported

TWO OBSTETRIC CASES ACCOMPANIED BY UNUSUAL SYMPTOMS.

On December 15, 1882, was asked by Mrs. M. to attend her in her thirteenth confinement, which she expected in about three weeks. Her other twelve children were alive, and she had no history of miscarriage. Her last child was born five years ago. She was forty-four years of age, and was very much surprised to find herself pregnant, which she would not acknowledge until she was fully seven months along, attributing the cessation of the menses, the only symptom of pregnancy perceived by herself, to her age.

She said her general health was good, the only thing she could complain of was being tired, she having worked hard about the house during the last month or two.

The symptoms which she mentioned, and which she said always came on in her former pregnancies two weeks before labor, were slight pains in her abdomen similar to the first pains of labor, only not so severe. No examination was made at this visit. A few days later she sent for me again, saying that the pains had increased in severity, and came on at a regular time each day, about four P. M., and would last through the evening well into the night. The pains were situated in front, running down into the groins and thighs, and were especially severe on the right side, feeling as if the child were pushing hard against the womb on that side. The digestion was good and the bowels were regular, though she did not have much appetite. There was no other sign of labor, and except for the pains keeping her awake some nights, she expressed herself as being very comfortable. This condition of things continued until January 10, 1883, when the pains lasted all day, and were so severe that she could not stand. On my visit I found her in bed suffering intensely. The pains came on at regular intervals, and the uterus could be felt contracting through the abdominal walls. On external examination the child could be mapped out, the back being to the front on the left side. By the vagina the cervix was not taken up, but was very soft; the external os was open, admitting the finger readily, the internal os closed. The pains had no effect on the cervix. The head was presenting high up. She was given one

fourth of a grain of morphia sulphate by the mouth and one drachm of compound liquorice powder was ordered to be taken at night, for although she insisted that her bowels were in good condition, I thought there must be something there causing the trouble.

The next day she said the morphia had relieved the pain, but had made her sick, and she had vomited. The powder had not operated. I advised her to remain in bed, and, as she was not taking enough nourishment as it seemed to me, prescribed a tablespoonful of extract of malt in a glass of sherry three times a day. From this time she improved, and the pains did not trouble her very much until the night of January 21st, when they were again quite severe. On examination at this time I found the cervix soft, considerably shortened since the last examination, the os open, but there was no indication of labor. I asked her how she would know when she really was in labor, and she replied she did not know, as the pains all along were exactly like the first labor pains.

At two A. M., January 24th, I was summoned by her husband, who said that our patient was suddenly taken with expulsive pains, and the child was born before he could get out of the house. On my arrival I found the child in the bed, still attached to the placenta, which had not been born. I tied and cut the cord, and removed the placenta, which was in the vagina. The uterus was well contracted, and there was no hæmorrhage. One drachm of the fluid extract of ergot was given. The child was a male, weighing seven pounds.

About half an hour after the birth of the placenta the patient complained of a pain in the uterus, and was seized with a violent chill which lasted ten minutes, finally yielding to stimulants internally and hot bottles placed in the bed. The chill was so severe that the whole bed shook, the patient's teeth chattered, and her face became cyanosed. During the chill the uterus was firmly contracted, and seemed to be held as if by a spasm. It remained firmly contracted after the chill. The temperature was normal, the pulse 70, and the patient very comfortable.

She was seen again at ten A. M., and found to be improving. Had taken a breakfast of gruel; had no after-pains, and was feeling very well. There was very little lochial discharge, the napkin scarcely being stained, and this was the only time that there was any red color to the discharge, which itself lasted only a few days. The milk appeared in the breasts forty-eight hours after delivery, and the convalescence progressed without an unfavorable symptom, she refusing to stay in bed after the seventh day.

The points of interest to me in the case were: the false pains coming on so long before labor set in, and the absence of the lochial discharge.

Most of the books to which I have had access speak of the occurrence of false pains, and dismiss the subject in a few sentences, saying that "pains simulating labor pains may come on a short time before labor sets in, that they are generally due to some digestive disturbance, and are usually remedied by opening the bowels."

In this case they seemed to me to be due to some other cause, but I was unable to find any, unless they could be attributed to the general condition of the woman.

The almost complete absence of the lochial discharge was an unusual occurrence, and I could find nothing about it in the books, though I have seen a few similar cases reported in some of the journals, and in the

American Journal of Obstetrics for July of this year. Dr. Tausky, in a paper read before the Academy of Medicine of New York, entitled *How to Secure the Best Possible Physical Condition after Parturition*, says: "A little hæmorrhage after parturition is very dangerous, and should be arrested. The accoucheur should be regarded as guilty of malpractice who would permit a slight quantity of blood to escape from the genital organs of a woman for days after parturition. Not a single drop of blood should appear after the completion of the third stage of labor; the napkins when removed should be perfectly free from color; and should they be colored, the physician should at once institute an examination with reference to the source from whence the blood came, and set about arresting it."

That this is not the usual experience was shown in the discussion which followed.

My second case presents quite a contrast with the first.

February 2, 1883, eleven P. M., I was asked to see a patient who was supposed to be having a miscarriage. On my arrival at the house I found a young girl about twenty years old, who thought she was six months pregnant with an illegitimate child. She could not tell when her last menstruation occurred, as she was never regular. She had been "keeping company" with a young man for some time, and did not know that she was pregnant until four weeks ago, when she was examined by two physicians, whom she had consulted on account of frequent micturition, and who told her that she was about six months advanced in pregnancy. So far as she could tell she had been perfectly well during the past year. Had had no nausea nor any illness whatever until lately, when she had been troubled with the frequent desire to urinate.

During the day she had been troubled, as she had been told that her lover was about to marry another girl, and to this anxiety she attributed the threatened miscarriage. After going to bed she noticed that she was passing water involuntarily. There was no pain, but all through the evening she had had attacks of shivering, which she says are due to her being so nervous. There is no sensation of cold accompanying these attacks. An external examination showed the uterus reaching above the umbilicus, and the breech of the child was felt at the fundus. The child was readily outlined lying on the right side of the abdomen. The foetal heart was heard to the right of the median line a little below the level of the umbilicus, 150 a minute.

Internal examination. The vagina is moist and cool, the pelvis roomy; the cervix entirely obliterated, and the os dilated to the size of a silver dollar. The head is felt through the membranes, with very little liquor amnii intervening. Water coming away from the uterus in considerable quantity, especially during contractions of the uterus, which take place during the shivering attacks. The girl is quiet and calm, except when the shivering comes on. These attacks continued at regular intervals, and with each attack the uterus could be felt to harden, and the membranes would become tense. There was no pain whatever.

At two A. M. (February 3d) the os was fully dilated, and the head engaged in the brim O. R. P. At this time she complained of some pain in the back, the head began to descend. The pains soon be-

came the regular expulsive pains of a normal labor, the head descended, rotated, and at 3.25 A. M. a perfectly formed female child weighing six and a half pounds was born. The placenta soon followed, and there was no further trouble.

At my visit the next morning the nurse called my attention to the woman's breasts, which were perfectly flat, with nipples more resembling a man's than a woman's. The third day after delivery the breasts began to enlarge, and by night were as large as the average woman's, but the baby could not nurse on account of the nipples, nor could it draw any milk through a nipple shield. I tried to relieve the breasts with a breast pump, but could not get any milk to run. As the breasts were very hard and heavy, causing considerable pain, I had the nurse rub them, which softened them considerably, but no milk came. They were then supported by a bandage and left alone. I ordered the bowels to be opened each day by an enema.

The next day the breasts were still full and rather painful, but from this time they gradually softened and grew smaller until they were perfectly flat again. The woman made a rapid convalescence without an untoward symptom.

Painless labor is spoken of in the books, but is considered of rare occurrence. Cases are seen where the first symptom of labor is the commencement of the expulsive stage, but in our case we had the first stage well marked except the pains, and these were replaced by chills. Women frequently complain of chilly sensations toward the end of the first stage, but I can find no mention of these sensations lasting through this time as we had here.

The breasts were evidently undeveloped, the nipples being merely rudimentary. That there was glandular tissue in the breasts I think is shown by the fact of their filling up and presenting the nodular feel which we get in the normal breast, but the ducts were not open, for no milk would flow from the nipple. The question arises whether the ducts might not have been opened by shaving off the nipple and the skin covering the small alveola, but I did not feel justified in attempting it.

DR. REYNOLDS said that it was very uncommon to have such absence of lochial discharge as in the first case reported. In the first stage of labor one may often have only chills without much pain, and where the delivery comes with a single expulsive effort it is often difficult to be sure that no previous pains have occurred.

In answer to a question, if the pains could have been due to rheumatism of the uterus, the reader thought not, as there was no rise of temperature as mentioned by Cazeau.

DR. C. M. GREEN had seen cases where pains simulating labor pains had occurred hours or days before delivery, often ceasing when labor began. They were attributed to rheumatism, and usually came in laboring women; he had had two cases where the lochia ceased on the second and third day, respectively, in each case twenty minim doses of ergot with a small amount of opium were given three times a day, but in most cases he would not give it. Dr. Matthews Duncan proposed giving ergot in cases of involution, but he thought that the use of ergot in such cases was unnecessary, and might act badly by contracting the vessels and hindering their proper action.

DR. SHERMAN stated that at the Lying-in Hospital

the routine practice is to give small doses of ergot for two weeks after delivery. He had not noticed any marked diminution in the amount of the lochial discharge.

DR. O. F. WADSWORTH then read a paper on

SOME CASES OF HYSTERICAL AFFECTION OF VISION.¹

DR. HASKET DERBY mentioned a case of a lawyer who had used a fan and umbrella to protect the eyes from the light for more than a year, but on making a journey to England was able to give up both.

He also spoke of a case where a lady became suddenly blind in one eye. The history was good, and the patient in comfortable circumstances. She was willing to undergo any treatment which might help her to regain her sight; the pupil reacted well to light and the fundus was normal. On putting a prism before the sound eye, after having told her that it would make her see double, she did see two objects, and then covering the well eye she became convinced of the fact that she was also seeing with the blind eye; and having had this fact proved to her she had no further trouble.

DR. EDES said that hysterical blindness often comes with hysterical hemianæsthesia with loss of hearing and taste. A theory of local anæmia has been suggested.

DR. WADSWORTH had examined several such cases, but had never been able to find any diminished fullness of the retinal vessels.

DR. DENNY said that Professor Schweigger² reports a case which resembles in general outline the cases just read, which he also regards as hysteric disturbance of vision. Hysteria, it should be remembered, is specially characterized, however, by its multiplicity of symptoms, and the case reported was that in which no other symptom of hysteria appeared than sudden loss of vision in the right eye of a girl of fourteen, nor was there any evidence of simulation. She was told that hypodermic injections of strychnia would relieve her, while pure water only was so used; in three weeks she recovered normal sight.

Dr. Landesberg³ reports a case of similar character, where simulation was not manifested, and gives to it the name of blindness due to imagination (*Vorstellungsblindheit*), but not that of hysteric affection of the vision. Thus he placed before the eyes of a patient who believed she was blind in one eye an arrangement of lenses whereby she seemed to see an object with the blind eye while really seeing it with the sound eye alone. The blindness thereupon was immediately transferred to the sound eye, and she saw plainly with the other eye.

Among the eighty cases of hysteria in the male sex collated by Dr. Klein⁴ I find but two definite examples of disturbance of vision, while all the cases were characterized by a *multiplicity* of symptoms besides, such as convulsions, globus, crying, laughing, hemianæsthesia, etc. One of these was a case of reflex amaurosis, and the other one of dyschromatopsia with limitation of the field of vision.

Malarial cachexia, anæmia, and general weakness will cause a temporary disorder of vision, which may be relieved by quinine, iron, change of location, etc., as is well known. I have encountered such cases in the form of night-blindness among soldiers in malarial

swamps, and in the form of transitory hemiopia due to weakness, anæmia, and cachexia without hysteria.

Two cases of what is usually called hysteric amaurosis, dyschromatopsia, and achromatopsia occurred during my service at the City Hospital in women, also under the care of Dr. Edes, that were marked by a great variety of symptoms, and in neither was there evidence of simulation. Among the symptoms, which were well defined, and of few days' duration only, were hemilateral amaurosis, hemianæsthesia, hemihyperæsthesia, hemiparesis, loss of hearing in one ear, and anæsthesia of the middle ear and tympanum, loss of taste on one side of the tongue, loss of smell in one nostril, transfer of sensation from the anæsthetic side to the other by sinapisms or electricity, hemianæsthesia of fauces and mucous membranes, polyuria, ischuria, hæmaturia, and hæmatemesia. To obtain still other positive signs which should exclude simulation I gave subcutaneous injections of pilocarpine, and found hemilateral sweating as a result in each case. The temperature by the thermometer was one half degree lower in the axilla of the hemianæsthetic side, while the arterial tension, as determined both by the finger and the sphygmograph, was markedly lower at the wrist of the anæsthetic side than upon the other radial.

Darting movements made with sharp instruments toward the pupil of the blind eye—the other being closed—produced no involuntary closure of lids or movements, while, when the other eye was opened, winking, scowling, and drawing back instantly followed such experiments. In neither case was there any local disease of the arteries or heart. These cases, while illustrating the multiplicity of symptoms which are usually associated with so-called hysteric disturbance of vision, might be designated better as neuroses of the sympathetic nervous system or functional disorders of the vasomotor nervous system.

REPORT OF THE EXECUTIVE BOARD OF THE MASSACHUSETTS MEDICO-LEGAL SOCIETY ON THE WORK OF THE MEDICAL EXAMINERS FOR THE YEAR 1882.

THE report of the Executive Board for the year ending December 31, 1882, is herewith presented. In its general features this report does not differ from the reports of previous years. Thirty-eight members of the Society have sent in summaries of their work for the year. From these the following statistics are derived:—

Whole number of views.....	954
Number of views followed by autopsies.....	189
Number of autopsies refused by authorities.....	1
Number of inquests held on above.....	179
Inquests at which medical examiners testified....	79
Cases reported by medical examiners as probably resulting from violence, in which no inquest was held.....	23
Number of deaths from natural causes.....	336
Number of deaths from railroad accidents.....	133
Number of deaths from other accidents.....	241
Number of deaths from suicide.....	117
Number of deaths from criminal violence.....	64
Number of deaths directly or indirectly the result of intemperance.....	128
Prosecutions resulting.....	17
Convictions in cases now finished.....	7

Two of the convictions resulted from cases begun in the previous year. The total number of convictions

¹ Reported in the JOURNAL for October 18th.

² Schmidt's Jahrbücher, No. 5, 1882.

³ Ibid.

⁴ De l'Hystérie chez l'Homme. Paris, 1880.

reported would seem to show a very meagre result from such a large amount of viewing and dissecting. It is probable, however, that many cases, like the two given above, are carried over into succeeding years, and do not appear at all in the reports, which in this respect, therefore, do not adequately represent the practical result of our work.

The relative proportion of autopsies and inquests to views for the period of five and a half years is as follows:—

Years.	1877 Six m.	1878	1879	1880	1881	1882
Views	443	52	770	935	945	954
Autopsies	116	196	182	182	179	189
Ratio of autopsies to views	26%	28%	23%	24%	19%	20%
Inquests	99	173	151	197	189	179
Ratio of inquests to views	22%	20%	20%	21%	20%	19%

The following percentages show the relative frequency of the various causes of death for the same period:—

Years.	1877	1878	1879	1880	1881	1882
Natural causes	24%	40%	38%	35%	40%	38%
Railroad accidents	13	14	11	14	13	15
Other accidents	30	25	29	25	28	27
Suicide	16	11	15	12	12	13
Violence	12	9	7	11	7	7
	100	100	100	100	100	100

Reports of individual cases to the number of one hundred and sixty-three have been made. The causes of death have been given in tabular form in two hundred and seven other cases. From the three hundred and seventy cases thus reported the following tables have been compiled:—

CAUSES OF DEATH IN GROUPS.

	No.	Percentage.
Accidental	186	37%
Natural	160	43
Suicide	51	14
Violence	26	6

ACCIDENTAL CAUSES OF DEATH.

Railroad casualties	55
Drowning	31
Falls	18
Run over by wagon	9
Poisoning	5
Chloral	3
Aconite	1
Methylic Alcohol	1
Falling bodies	3
Explosions	3
Machinery accidents	2
Blasting accidents	2
Suffocation	1
Caving of gravel bank	1
Shooting	1
Kicked by horse	1
Hæmorrhage (bite of tongue in fit)	1
Exposure	1
Burning	1
Over-exertion in jumping rope	1

NATURAL CAUSES OF DEATH.

Heart disease	46
Stillbirth	19

Premature birth	16
Alcoholism	15
Apoplexy	14
Unknown	11
Pneumonia	8
Peritonitis	6
Bronchitis	4
Pulmonary hæmorrhage	3
Meningitis	3
Old age	2
Congestion of brain	2
Aneurism	1
Cholera infantum	1
Cirrhosis of liver	1
Diarrhoea	1
Delirium tremens	1
Typhoid fever	1
Phthisis	1
Debility and exposure	1
Septicæmia	1
Marasmus	1
Poisoning (?) (habitual use of morphia)	1

DEATHS BY SUICIDE.

Drowning	10
Hanging	10
Cutting throat	6
Shooting	16
Poisoning	8
Arsenic	2
Opium	2
Illuminating gas	2
Strychnine	1
Chloral	1
Cutting arm	1

DEATHS BY CRIMINAL VIOLENCE.

Infanticide	11
Suffocation	1
Neglect to tie funia	1
Neglect in general	2
Exposure	2
Strangulation	1
Blow on head	1
Drowning	1
Unknown method	2
Abortion	3
Blows	2
Pistol-shot wound of abdomen	1
Stabs (wounding carotid artery)	1
Incised wounds of neck	1
Incised wounds of vulva	1
Privation	1
Blows, kicks, or violent pressure on abdomen	2

The great falling off in the number of full reports of cases is very noticeable. The attempt of the Society to obtain and preserve in its archives complete records of all cases coming under the notice of its members has not proved a conspicuous success. Many of the reports thus far obtained are interesting and valuable; but a portion of them are so meagre in their details as to be practically worthless. It is obvious that the standard of the Society in this particular was set too high, and that the burden placed upon members by the requirements of the by-laws is greater than many of them are willing to bear. Two members of the Society report upwards of one third the total number of cases. The amount of simple clerical work, to say nothing of brain labor, involved in preparing complete histories of all these views and autopsies, is something fearful to contemplate: while for those who have fifty or even thirty cases the task is no easy one if conscientiously and thoroughly performed. It is therefore thought best by the Executive Board to advise that members be allowed to report their cases in tabular form, using blanks provided by the Society with headings like the following:—

- (1.) Number of view.
- (2.) Location of view.
- (3.) Date of view.
- (4.) Name of person viewed.
- (5.) Age of person viewed.
- (6.) Sex of person viewed.
- (7.) Supposed date of death.
- (8.) Cause of death in form of medico-legal diagnosis.
- (9.) Autopsy.
- (10.) Inquest.
- (11.) Verdict.
- (12.) Prosecution.
- (13.) Conviction.
- (14.) Remarks.

By making use of paper with fine rulings, and devoting several lines to each case, enough space will be obtained to state all the leading facts,—all certainly that are employed in preparing our annual reports. Every member is supposed to keep a careful record of all his cases; and if any have the time and feel willing to prepare copies of these records for the benefit of the Society, the Corresponding Secretary should stand ready hereafter, as in the past, to receive and file away in the usual manner all such reports. It is possible that medical examiners who are not members of the society may, if appealed to, fill out the above mentioned blank forms, and that with a little extra effort we may be able to obtain complete statistics for the whole State. The object to be attained is so desirable that it certainly seems worth our while to make the trial.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY evening, November 8, 1888. The President, DR. TYSON, in the chair.

CYLINDRICAL-CELLED EPITHELIOMA OF CÆCUM.

Exhibited by DR. WILLIAM E. HUGHES.

Thomas C., white, aged forty-six. Occupation of late years car-driver, before that laborer. Always exposed much to weather, but had led a fairly regular life, using stimulants, tea, coffee, and tobacco very moderately. Much family and business trouble, about which he had worried a great deal. A brother and his father's sister have phthisis. With these exceptions the family history is good. There is no instance of the occurrence of a malignant growth. Married, and the father of five healthy children. He had had the ordinary diseases of childhood. When quite young he received a severe injury leading to ankylosis of the left knee and consequent wasting of that extremity. In boyhood he had intermittent fever. When a young man any indiscretion in diet or exposure to exhausting influences would produce a slight diarrhoea, never lasting long, and always easily controlled. With these exceptions he was perfectly well and strong, and this tendency to looseness of the bowels seemed to be overcome as he grew older. Seven years before coming under observation he had, following exposure, an attack of diarrhoea, lasting a few days and disappearing spontaneously. In the next month his bowels were regular, but at the end of that period the diarrhoea recurred. For the next four years he had diarrhoea alternating with regularity of bowels, the diarrhoea becoming more violent and uncontrollable and the periods of regularity shorter. For three years the diarrhoea had been constant, worse in the winter, and much aggravated by exposure, overwork, or any other indiscretion. There

had been no pain in the abdomen, and only rarely a slight feeling of discomfort, due, as he thought, to flatulence. Appetite, till within a year, had been good; since then capricious, with occasional slight dyspeptic symptoms. During the three years in which the diarrhoea was constant he slowly and steadily lost flesh and strength, though his general health was good. During the last twenty months the quantity of urine passed exceeded the normal, at times rising, according to the patient's statement, to more than a gallon in twenty-four hours; this exceedingly profuse urination being always accompanied by extreme thirst. During the latter part of this period there had been œdema of the lower extremities, much more marked on the left, appearing and disappearing irregularly. When he came under observation the patient presented the following conditions: Tall, emaciated, his frame gave evidence of great muscular development at one time. Expression moody, discontented. Complexion sallow, earthy, pasty. Sclera pearly. Appetite poor; very slight dyspepsia. Tongue clean. Bowels are moved from ten to fifteen times in twenty-four hours. The movements are neither preceded nor accompanied by pain. The passages are dark, watery, frothy, and exceedingly fetid. They contain neither blood nor mucus, though the patient says if he takes cold large quantities of mucus invariably make their appearance in the stools. Abdomen slightly tympanitic; not the slightest tenderness can be developed on the deepest pressure, nor can any abnormality be detected. However, a thorough examination could not be made, as the ribs extended almost to the crests of the ilia. The apex beat of the heart is in the fifth interspace just outside of the nipple, the impulse strong, heaving, and the second sound somewhat accentuated. The quantity of urine passed is increased to specific gravity 1012, and it contains neither albumen nor tube casts, though the patient says large quantities of albumen were found in it some weeks before. Slight œdema of lower extremities, more marked on left; no fluid in any of the cavities. He was under treatment a week; improving markedly, the number of stools being reduced to two per diem. At the end of that time he was seized with a chill followed by fever (102° F.) and intense exhaustion. He died in a few hours, apparently from general failure of vital forces.

Autopsy (ten hours after death). Some serous fluid in each pleural cavity, with old adhesions at apices. Lungs showed puckerings and cicatrices at apices. Both were extremely œdematous, with decidedly hypostatic congestion. Heart somewhat hypertrophied. Mitral valve slightly thickened but competent. Left ventricle firmly contracted. Right less firm, its cavity containing currant jelly clot and small amount of chicken fat clot. Liver somewhat cirrhotic and fatty, size normal. Kidneys showed thickening of walls of arteries and adherent capsules. Small intestine normal. Wall of the large intestine thickened, the thickening due principally to a hyperplasia of the mucous membrane, which was soft, velvety, dark lead-colored, studded with hard white points, the hypertrophied follicles. In the cæcum, completely surrounding the gut but producing no obstruction, was a ragged, ulcerated neoplasm, developed apparently from the mucous membrane. It was abruptly limited by the ileo-cæcal valve, and did not involve the vermiform appendix. The abdominal lymphatic glands were all enlarged. There were no secondary deposits in any of the organs. Microscopic exam-

ination of the growth showed it to be a cylindrical-celled epithelioma.

Remarks. The case was one in which evidently the neoplasm was the result of the chronic catarrhal condition of the mucous membrane of the large intestine, or else the cancerous growth had been of unusually long duration (seven years). That the former was not the case is probable from the fact that the catarrh was limited to the mucous membrane below the ulcerated growth, and was apparently due to the irritating discharge, the small intestine being perfectly healthy. Sudden death is quite common in chronic diarrhoea, especially the form due to cancer, and is very difficult of explanation. Possibly some sudden disturbance of the vaso-motor centres, the cause acting through the abdominal sympathetic, may be at the bottom of it.

CASE OF SARCOMA OCCUPYING THE ANTERIOR MEDIASTINUM.

By DR. EDWARD T. BRUEN.

A. M., a male, came under my notice as a patient in Blockley Hospital in December, 1882. His family history was excellent, and he had enjoyed good health until eight months before. His illness had been chiefly characterized by emaciation and pain in the chest. He was a tall, slightly-built man, and when I saw him had evidently lost half his weight. The pain was most severe over the upper segment of the sternum, and radiated around the chest. There was dullness on percussion over the upper piece of the sternum; the respiratory murmur at the right border of the upper part of the sternum was bronchial. The cardiac sounds, particularly the second sounds, were almost absent. The noticeable feature about the above signs of percussion and auscultation seemed to be the localization of the pathological physical signs to a district scarcely more than four square inches at the upper part of the sternum; the dullness downwards was continuous with the cardiac dullness. Elsewhere the physical signs were normal. There was, in addition to the above, some lividity of the face, with enlargement of the veins of the upper part of the neck. The patient died on February, 1883, from exhaustion, worn out by the pain, which increased with the progress of the case. The case was conspicuous by the absence of any symptoms implicating other parts of the body.

Post-mortem Examination. On removing the sternum and the cartilages they were found adherent upon the right side to a mass which occupied the anterior mediastinum. The growth was seven inches long measuring from the sternal notch, terminating in a somewhat diffused thickening of the visceral pleura, covering the anterior margin of the upper and middle lobe of the right lung. The growth was distinctly sausage shaped, and about two and a half inches broad. It overlay the aorta, pulmonary artery, and the vessels of the neck, thereby compressing them and accounting for the muffling of the second sound during life. The growth seemed to be unconnected with the anterior mediastinal glands; the glands at the root of the lung were only slightly swollen, but not generally affected. The calibre of the trachea was not diminished. The glands of the neck were not affected on either side. Laterally at the lower portion of the growth the pleura of the lung was thickened at the line of contact, but the lungs were free from traces of disease. The pericardial tissues at the right side of the chest were also somewhat thickened. The growth it-

self was of fibrous consistence, of a gray white color, and contained a softened tissue running through its centre.

It was found on microscopic examination to be composed of medium-sized lymphoid cells, mixed with spindle-shaped cells and imbedded in a homogeneous stroma, or a stroma which consisted of reticulated fibrous and wavy fibrous tissue. The peripheral thickening of the pleura and pericardium were made up from similar elements. In conclusion, let me say that during life the tumor was diagnosticated, and the opinion entertained, that the growth would prove a sarcoma, and not a cancer. This diagnosis was based upon the location of the disease in the anterior, instead of the posterior, mediastinum, upon the age of the patient, and upon the rapidity of the progress of the case, which began in April and terminated in the following February. There was also entire freedom from inherited tendencies to morbid growth, but it was noted that the patient had been a shoemaker, and when at his work was accustomed to press some of his tools of trade against the sternum. The second interesting point was the absence of any tendency to excite morbid formation in the adjacent tissues. The growth apparently originated in the connective tissues of the mediastinum and not in the bronchial or thymus glands, and I believe that I am justified from microscopic examination in considering the growth a form of sarcoma, and as being of special interest to the Society on account of its rarity. Without having made an extensive examination of recorded cases, yet in looking over the Transactions of London Pathological Society the past ten years I find only three cases recorded of sarcoma of the anterior mediastinum, and in only one of these was the growth as localized as the one I present this evening; in the others the glands of axillæ or neck were involved, and also in one of them the tissues of the lungs.

DR. FORMAD then exhibited the apparatus used by Koch in the cultivation of bacteria, and described the methods used.

DRS. RIDGE, of Camden, and SHAKESPEARE, of Philadelphia, discussed the subject.

A MEETING OF REPRESENTATIVES OF STATE BOARDS OF HEALTH AT DETROIT, NOVEMBER, 1883.

REPORTED BY THE SECRETARY, J. N. MCCORMACK, M. D.

CONCERTED ACTION BY STATE BOARDS OF HEALTH.

THERE has been a growing conviction among leading sanitarians intrusted with the official execution of practical health measures that while the work of the American Public Health Association is of inestimable value in promoting the interests of sanitary science and sanitary reform, there is a constantly increasing need for an annual conference of State and other health officials in regard to practical affairs of their every-day work, some part of which work cannot profitably be discussed in a public meeting consisting largely of persons not familiar with its details.

After due consideration a meeting of representatives of State Boards was held at Detroit during the recent meeting of the American Public Health Association, at which, after discussion, it was decided to call a meeting of the secretaries or other representatives of all State Boards of Health in Washington during May,

1884, for the purposes mentioned, and with the view of organizing a section devoted to State Board work in the present Association or the formation of a permanent separate organization especially adapted to the needs of State Boards of Health. Drs. Henry B. Baker, of Michigan, and J. N. McCormack, of Kentucky, were appointed a committee to confer with and secure the coöperation of all the State Boards in fulfilling the object of the meeting, and Drs. C. W. Chamberlain, of Connecticut, J. E. Reeves, of West Virginia, and Stephen Smith, of New York, were appointed a committee on organization to report at the meeting in May. The American Medical Association meets in Washington in May, and another reason for holding the meeting in Washington is that the representatives of the State Boards may also have an opportunity for conferring with the senators and representatives in Congress from their respective States in regard to national sanitary legislation. It would seem that whenever the health authorities of all the States shall meet, discuss, and agree upon the course they will pursue with respect to yellow fever, cholera, small-pox or any disease which endangers public health without regard to State lines or borders, and whenever all State Boards shall act in concert, considerable progress will have been made in solving the problem of what are the best methods for national action in regard to inter-State and maritime quarantine or inspection and disinfection as well as in the practical control of epidemic diseases within the several States of this country.

Recent Literature.

Insanity. Its Classification, Diagnosis, and Treatment. A Manual for Students and Practitioners of Medicine. By E. C. SPITZKA, M. D. New York: Birmingham & Co. 1883.

Since the trial of Guiteau, either as a direct result or owing to accident, the study of psychological medicine has had new life infused into it. This fact is demonstrated in part by the large number of papers, books, and articles of every sort that have appeared in print from time to time. The book before us is one of the larger kind that have gone to swell the stream. The present year has already seen three good-sized treatises on insanity by American writers, and as six weeks still remain, we may see one or two more. This fertility in authorship is, however, only commendable, as it is a duty of every medical man to share any special knowledge with his less fortunate brethren. In past years we have been too much in the habit of keeping our experience or our new ideas pent up within our bosoms, and if at last the infection not of German measles but German verbosity and love of *Zeitschriften* and *Jahrbuchs* has reached us, we may hope to see the standard of American medical literature much elevated.

Dr. Spitzka possesses the true German love of scientific studies and facility of putting them on paper. Judging from the way his books read, he is a perfect Niagara both of ideas and words, and when the English language becomes a little contracted, he easily expands it to suit his purposes. But this manual of only 400 pages is merely an introduction to a larger work on insanity to appear in a few years. For this reason almost all bibliographical references are omitted, we

are told. This we regard as unfortunate, as many of us may be dead and buried, or in too reduced circumstances to buy the larger work when it appears, and we like a book compiled in a manner that will be useful for immediate study.

As this manual is no "more than a surface view of the domain of insanity," it is hardly fair to subject it to too extended criticism.

The author endeavors like many others to formulate a satisfactory definition of insanity, but we find it both cumbersome and lacking in clearness. We are rather sorry that he did not follow the example of the most recent German writers he speaks of, and not give any definition at all. Insanity is a disease which cannot be accurately described in a few words, and the sooner we recognize this fact the better.

Neither are we satisfied with the definition of delusions, hallucinations, etc. Delusions, for instance, are called "faulty ideas growing out of a perversion or weakening of the logical apparatus." "Logical apparatus" has no meaning either from a scientific or grammatical point of view. "Faulty ideas" are not false ideas, and not of necessity delusions. And any "faulty" idea (we use the word *faulty* under protest) must grow out of some perversion of our reasoning powers.

The chapter on The Delusions of the Insane, though brief, is clear and interesting, and the following one on Imperative Conceptions and Morbid Propensities may be commended for saying a good deal in a few words.

Of special interest is the chapter on The Morbid Anatomy of Insanity. The importance of functional changes is clearly pointed out, and the rarity of coarse formative changes in most of the primary psychoses is especially noticed. Many of the extraordinary pathological findings of some investigators Dr. Spitzka shows to be accidental or natural. The views expressed throughout the chapter are conservative and in accordance with the highest principle of scientific investigation, which accepts no half-truth, but proven facts alone.

The system of classification is not above criticism, as Dr. Spitzka himself says, but we have never as yet seen a perfect classification.

Taken as a whole the book is a valuable one, and of real use to the alienist. Its chief fault lies in its indulgence in personalities, which are a blot to any textbook. Some of its minor faults have been already mentioned. Its chief merit consists in its effort to present the subject in a clear, accurate, and scientific manner.

State Charities Aid Association, No. 82. Handbook for Hospitals. New York: G. P. Putnam's Sons. 1883.

Hospitals, Infirmaries, and Dispensaries: Their Construction, Interior Arrangement, and Management. With Descriptions of Existing Institutions, and Seventy-four Illustrations. By F. OPPERT, M. D., M. R. C. P. L. Second [English] Edition. Revised and Enlarged. London: J. & A. Churchill. 1883.

The first of these books was prepared in 1877 for the use of those members of the State Charities Aid Association whose duty it is to visit the public hospitals in New York County and other counties of that State. It is addressed chiefly to women visitors, and enters into many domestic details of hospital manage-

ment, such as cleanliness, order, tone of discipline, nursing, diet, and laundry work; hospital house-keeping, in short, in the inspection of which judicious and intelligent women may be of the greatest service. This book should be in the hands of every one, male or female, connected with a hospital, whether in a resident or visiting capacity. It is well arranged, concise, handy, and for the most part practical and thorough.

Dr. Oppert's work is an octavo volume of a more ambitious character. It was originally written in German, in which language it has been through two editions, as well as a previous one in English. Its scope has now been enlarged, and it is divided into a first part of eighty-four pages on the construction, external and internal, administration, and subdivision of hospitals; and a second part, of nearly two hundred pages, devoted to a description, with numerous diagrams, of "all the most noteworthy hospital establishments in existence." For an account of English, French, and German hospitals the book does very well, but its value beyond that may easily be estimated when we remark that the Johns Hopkins Hospital is dismissed in half a dozen lines; one page is given to the hospitals of Massachusetts, of which the Boston City Hospital takes up two thirds, no mention being made of the General Hospital; only two pages are given to New York, the New York Hospital is not mentioned; Philadelphia receives four lines, the Pennsylvania Hospital not being noticed, etc., etc.

Dr. Oppert's book is a pretentious and phenomenally imperfect *parvum in multo*. Should it ever reach another edition, he should either attempt less, or offer more. This is, we are aware, strange advice to be tendered to a German.

Recherches Cliniques et Therapeutiques sur l'Epilepsie, l'Hystérie, et l'Idiotie. Compte rendu du Service des Épileptiques et des Enfants, Idiots, et Arriérés de Bicêtre pendant l'Année 1881. BOURNEVILLE, Physician to Bicêtre. E. BONNAIRE et WUILLAMIS, Internes. Paris: A. Delahaye et E. Lecrosnier. 1882. Pages xvi., 178.

This is one of the series issued as Publications du Progrès Medical. The sixteen pages contain a brief report of the more important events and patients for the year, a table of deaths, with the causes, and a table of the patients remaining at the close of the year. The rest of the book is devoted to detailed and carefully prepared histories of the more interesting cases, giving many autopsies, with illustrations of the abnormal brains. Cases of idiocy from various causes, observations of epilepsy, a case of hystero-epilepsy in a boy, and the effect produced upon epilepsy by measles, are among the more interesting subjects considered.

The boy affected with hystero-epilepsy was thirteen years old, of a neurotic family; he had numerous convulsive attacks; there were numerous tender hysterogenous points along the sides of the spine, and in the fifth and seventh intercostal space, over the sternum, on the sides, and nearly in the centre of the iliac fossæ. The treatment consisted first in tonics, capsules of bromide of camphor, baths, and gymnastic exercises; then, when it was possible, cold douches in spray and in jet, at first thirty seconds, then forty.

There was an epidemic of measles among the epileptics. The attacks of epilepsy were markedly diminished

uring the measles, but on recovery therefrom the epilepsy retook its previous severity.

A Guide to American Medical Students in Europe. By HENRY HUN, M. D. New York: William Wood & Co. 1883.

This book fills a need long felt, and should be in the hands of every medical man going abroad. Before starting for Europe the student has always a thousand questions to ask, and before arriving there the answers to most of them have been forgotten. With this guide-book at hand many of these questions can be answered at the right moment and much time saved. The introduction on the technique of travel, mode of living, study of German, etc., though short, is to the point. The advice, for example, to spend a few months in a German family studying the language to the neglect of medicine is excellent. The plan of living during term time in lodgings and eating at restaurants while popular perhaps with most students is extremely distasteful to many, while living in a German *Pension*, with all its drawbacks, offers attractions and advantages to which the author seems hardly to have done justice. The courses of study in the Universities of Austria, Germany, Switzerland, Paris, London, and Dublin are thoroughly and excellently described, a compilation made with great care, and conveying information gained hitherto only from scattered sources. The schedule of a student's day in Vienna contains nine courses on different subjects between eight A. M. and eight P. M., leading one to wonder where the studying comes in, and how much of what is seen and heard in those twelve hours is carried away for future reference. The advice to go to Prague or Dresden to study midwifery, to Heidelberg to study pathological anatomy, to Leipzig to study anatomy, etc., is quite refreshing after the description of work at Vienna, and leads one to suspect that a student with two years or more at his disposal might best at first pursue a few studies at a time in some of the smaller German universities, and finish up his stay by using his eyes and ears for a time at Vienna. Each person must, however, settle these questions according to his individual needs and opportunities, and to all this effort of Dr. Hun will furnish a valuable guide and book of reference. One improvement suggesting itself is an alphabetical index, through which, for example, one could ascertain easily the whereabouts of the various professors whose names are prominent in medical literature.

Gout in its Protean Aspects. By J. MILNER FOTHERGILL, M. D. Detroit: George S. Davis. 1883.

We suppose this is to be regarded as Part II. of one work of which Indigestion and Biliousness, published in 1881, was Part I. Dr. Fothergill is an easy writer and a good book maker. The dedication is to Dr. Garrod, and those who wish to read rather than to consult will find this a handy book in an agreeable style, though it will not dispossess Dr. Garrod's treatise of the space upon their shelves.

—The late Dr. Samuel E. Fitz bequeathed two thirds of his residuary estate to Harvard College for the use of the Medical School.

Medical and Surgical Journal.

THURSDAY, DECEMBER 6, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter.

HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

INTERCOLLEGIATE FOOT-BALL.

THE Committee on Athletics of Harvard College recently issued by Prof. Charles Eliot Norton, its chairman, a formal prohibition of the game of foot-ball as at present played among the students, to take effect immediately. The grounds on which the decision was made are thus expressed:—

"The attention of the Committee on Athletics has been sharply called during the past few weeks by the numerous accidents which have happened at foot-ball on the playgrounds of various colleges, to the conditions under which the intercollegiate match games of foot-ball are now played, and to the rules of the American Intercollegiate Association for the season of 1883. Some of these rules seem to the committee to be highly objectionable. Rules 19, 28, and 38, a copy of which I append, appear to allow of no other inference than that the manly spirit of fair play is not expected to govern the conduct of all players, but that, on the contrary, the spirit of sharpers and of roughs has to be guarded against. The committee believe that the games hotly played under these rules have already begun to degenerate from a manly if rough sport into brutal and dangerous contests. They regard this as a serious misfortune in the interest of the game, which, if played in a gentlemanly spirit, may be one of the most useful college sports as a means of physical development. They regret that they did not give earlier attention to the character of these rules, and thus earlier come to the conclusion which they have now reached, namely, that the Harvard eleven cannot be allowed to take part in any further intercollegiate match games until substantial changes in the rules have been made."

The rules objected to read as follows:—

Rule 19 — The referee shall take out time for unnecessary delay. Shall decide disputed points, and shall disqualify any player whom he has warned twice for intentional off-side play, intentional tackling in touch, or intentional violating of rule 28.

Rule 28 — No hacking, throttling, butting, tripping up, tackling below the hips, or striking with closed fist shall be allowed.

Rule 38 — No player shall intentionally lay hands upon or interfere with an opponent unless he has the ball.

The members of the eleven at once took measures to change the rules which were objected to, and it is

understood that the amendments made have been approved by the Committee of the Faculty, and the restriction will be taken off. A summary interdiction of the game in the midst of the season is liable to work an apparent injustice to those, especially members of other colleges, who have arranged for games to be played on certain fixed dates, as such prohibition may debar them from receipts of gate money which has been counted upon to meet current expenses. But on the other hand it has been said, we know not how truly, that several of the members of the Harvard Team are more or less seriously incapacitated by reason of injuries received in the game, and that it has become necessary to draw upon some of the substitutes to fill the places of the disabled, while but few of the original players have not suffered to some extent from the roughness of the game.

We have ourselves been present at an intercollegiate foot-ball match, where all the players were supposed to be gentlemen, which at times strongly resembled a free fight, and we should have had no difficulty in picking out the original offender on that occasion. The unavoidable risks of foot-ball played by the Rugby rules are sufficient, as is quite frequently illustrated in the English papers, without adding any further hostile embellishments, such as slugging.

We are glad to see that the Harvard Faculty are appreciating their responsibility for the physical welfare, in these respects, of the young men placed under their charge. As is well known to many of our readers, the whole subject of athletics has been referred to a committee with almost full powers, on the ground that the questions constantly occurring as to specific details may meet with a more prompt and intelligent decision than could be obtained from the larger body. But a more specific direction still is needed, which can only be secured by intrusting the supervision of this important matter to some one man, who by personal experience of the requirements of athletic games, and at the same time a knowledge of the laws of health and some maturity of judgment, will be able to exercise a wise and temperate control. We understand that such a plan is in fact contemplated, it being under advisement to appoint a man, preferably a graduate and perhaps one connected with some of the professional schools, to such a position, the rank and compensation of which shall be equal to those of an instructor in the college. If this plan is pursued and a suitable incumbent for the new office secured, there need be no unfortunate interruption, to the disappointment of other collegiate teams, of games already appointed, while there will be security for our young men against the various unnecessary perils of athletic contests. The appointment of a medical director of the gymnasium was a step in the right direction, but the good offices of that official are shared by all the students, while the field of the new officer would be a narrower one, though still very important for the class who participate actively in athletic sports. With the hearty coöperation which should exist between the medical director of physical culture and the not necessarily medical man who superintends the domain of athletic

contests, there should be a maximum of all the good effects of strength-developing sports, and a minimum of the overtraining and overstraining that have been the bane of such contests.

ANNUAL REPORT OF THE SURGEON-GENERAL UNITED STATES ARMY, 1883.

THE annual report prepared by the late Surgeon-General Crane is submitted without his signature by Acting Surgeon-General Huntington. It contains the usual account of the finances and transactions of the office. The figures giving the comparative tables of disease and mortality between white and colored troops are very interesting, but the numbers for a single year are hardly large enough to be very valuable. The average number constantly on sick report during the year was among the white troops at the rate of thirty-eight per thousand, among the colored troops thirty per thousand.

It is interesting to note that the colored troops make a particularly favorable showing in the small number of admissions for alcoholism and its results, exhibiting as they do a rate of only four per thousand, in marked contrast to a rate of seventy-six per thousand of mean strength among the whites. On the other hand, in diseases of the nervous system they have an unexplained preponderance.

Among the causes of death, diseases of the respiratory organs occupy the first place. Extremes of temperature are supposed to account for this in part, but natural causes are not considered as the only factor; to a larger extent insufficient ventilation of barracks and dormitories, as well as irregular and unequal distribution of artificial heat during cold weather, must be held responsible."

Wounds, injuries, and accidents stand second on the list of causes impairing the effectiveness of the army. The large number recorded in this class may probably be attributed to the use of troops in mechanical and laborious employments, which form so large a proportion of the soldier's duties. As an indication of the peculiar hardships to which our troops are exposed, the rates of admission for wounds, accidents, and injuries are 122 per thousand higher than those reported for the German army, and 142 per thousand higher than the decennial rate of the British army.

An interesting account of a mild epidemic of yellow fever at Fort Brown, Texas, is given. Including soldiers and civilians there were sixty-eight cases and six deaths.

Measures for preventing the spread of the disease appear to have been promptly enforced; isolation of the sick and a thorough police and disinfection of the post was tried, but, unfortunately, without success. Abandonment of the infected locality on the twenty-third day of the epidemic was followed by better results, as only three cases are reported in the camp, which was pitched a few miles from the fort, and as these occurred within three days after the move the men may be considered to have been infected before

their departure. The removal of a portion of the command from the northern to the southern part of the garrison appears to have materially checked the progress of the disease, and a subsequent move of the same troops on the forty-third day of the epidemic to camp, from which, as in the former instance, only three new cases were sent back to the fort, practically brought it to a close.

The details of the amount of work done in the Record and Pension Department show that great pains are taken to preserve the invaluable documents which relate to the War of the Rebellion. It seems scandalous that with all our surplus revenues these papers, the loss of which would add unsurmountable difficulties to the adjustment of claims still pending against the government, should be left without adequate protection against fire. The means have been devised, however, for the rescue of the more important volumes. In Section B (in hired buildings on F Street) nearly six thousand hospital registers and death and discharge registers have been placed on the ground floor, in truck cases, so arranged that in the event of danger they can be run out of the building into the street; in Section A (in the building on Tenth Street) similar precautions have been taken for the rescue of three thousand additional registers. If sufficient warning can be given the greater part of such records as are indispensable to the pension work of the Office will probably be saved.

The manuscript of Volume V. of the Index Catalogue is reported as in an advanced stage of preparation, and the first part of it is now going to press. An estimate for Volume VI. has been prepared, and it is hoped that the necessary appropriation will be promptly granted.

A manuscript catalogue of the Army Medical Museum is now in course of preparation, which will include a description of all specimens in the Museum at the present time. As such a catalogue is indispensable to the practical usefulness of so valuable a collection, it is hoped that authority may be granted by Congress for the printing and binding of this work also. The present catalogue was printed in 1866, and contains a description of less than one third of the present specimens.

As physicians we have special reason to be proud of the Army Medical Department.

THE REPORT OF THE UNITED STATES MARINE HOSPITAL SERVICE.

THE Surgeon-General of the Marine Hospital Service of the United States has presented his annual report for the year ending June 30, 1883. During this year 40,195 patients received relief from the Service, of whom 13,356 were treated in the hospitals, and 26,839 at the dispensaries; 327,312 days' relief were furnished. The receipts from all sources were \$426,620.35, and the expenditures \$469,966.21. This includes \$35,440.92 which was expended on account of extraordinary alterations and repairs to hospital build-

ings, which may be looked on as a permanent investment. In addition to medical supplies furnished to the Marine Hospital Service in general the vessels of the Revenue Cutter Service have also been largely supplied from the purveying division of the Service.

Of nineteen candidates out of thirty-seven applications who presented themselves for examination for admission to the medical staff five were passed.

The examination of pilots for color-blindness has been continued through the year, and no complaint is now made about the examination. It has become apparent that the examination should be conducted not only for color-blindness, but for acuteness of vision and hearing as well. Persons have applied for positions as pilots who were able to see but a very short distance, and some blind in one eye, and accounts have appeared in the public press of pilots who were discovered to be almost entirely deaf.

The recommendations previously made by the Surgeon-General concerning the physical examination of seamen as preliminary to shipment, and the establishment of a national snug harbor for seamen injured or disabled in the line of duty, are renewed. He calls attention to the need of competent medical service for patients of the Merchant Marine in Alaska, and the general subject of medical relief for Indians and others.

The experience of the United States since the passage of the Act of April 29, 1878, has abundantly demonstrated that a reasonable national quarantine system is a necessity; not the old-fashioned forty-day affair, nor yet such a quarantine as would in any measure interfere with or cripple the local quarantine establishments, but one that would efficiently supplement them. The appropriation made by the government during the past two years has been principally used at the Southern and South Atlantic sea-board in the maintenance of national quarantines and the quarantine at Pensacola in aid of the local Board of Health, and it may probably be fairly claimed for the Service that the non-introduction of yellow fever into the cities of the Gulf coast during the last season is at least partially due to the maintenance by it of such quarantines, and the hearty coöperation of the local Boards of Health. A valuable report on the yellow fever epidemic of 1882 in the United States and Mexico, including full statements by officers of the Service, affords ample proof of the efficacy of quarantine in this disease. The duty of excluding yellow fever and similar infectious diseases at the point where they naturally make their appearance, namely, on the sea-board, can be very properly discharged by the Marine Hospital Service. With this limit the duty of the government apparently ends; the question of local municipal sanitation is one which may with propriety be left to the States. The entire expenses on account of the epidemic appropriation for the two years, up to June 30, 1883, was \$54,678.10.

The usual tables of statistics, papers on selected cases from hospital practice, and reports of autopsies follow.

MEDICAL NOTES.

— Dr. E. M. Snow, for so many years Superintendent of Health and City Registrar of Providence, R. I., has not been chosen to those offices for the coming year.

— "A gentleman and a slugger!" was the titular form in which the salutation of an enthusiastic admirer found expression at a recent reception given to our distinguished fellow-townsmen, Mr. John L. Sullivan, who, however, is not a member of any collegiate foot-ball team.

— Foot-ball as played in England is not without its dangers, as the following attests: "At the Oxford University foot-ball matches on Saturday several serious accidents occurred. Mr. Gore received serious injuries, but is progressing favorably. Fowler, of Magdalen, sustained a fracture of one of his legs. At Cambridge, in the Rugby match between University and Kensington, Colbourn Hope broke his leg, and another Cantab was very much hurt. One of the Kensington men had his nose smashed, and another severely sprained his ankle. Most of the players received slight injuries, and minor casualties occurred in other games." But we are assured by a young gentleman, lately from Oxford, that he had never seen "slugging" until present at the last Harvard-Yale Freshman Match. It is not essential even to the Rugby game.

— The death is announced of Louise Lateau, the Belgian girl whose manifestations of the "stigmata" gave her a world-wide reputation some years ago. It will be remembered that the results of the most careful examination of the Academy of Science were the detection of fraud and imposition, which had escaped previous observers.

NEW YORK.

— At the quarterly meeting of the State Board of Health, held at Albany, November 21st, Dr. Smith, Health Officer of the port of New York, reported a diminution in the cases of small-pox arriving at the port, and attributed this in part to his efforts during the past year to induce greater interest in the subject of vaccination on the other side of the Atlantic. He suggested the advisability of a conference of the quarantine authorities of the various States, with a view to uniformity of procedure in matters of disinfection, and called special attention to the dangers arising from the importation of rags. Mr. James F. Gardiner made a report from the Committee on Drainage, Sewerage, and Topography, and Dr. Elisha Harris, the secretary of the Board, presented a statement of the progress of the work of investigating the outbreak of diphtheria at the Batavia Blind Asylum. The public nuisances maintained by the large starch factory at Glen Cove, Long Island, were made the subject of a special report to the Governor, in which a number of recommendations for the abatement of the same were urged.

— At the last meeting of the Saturday and Sunday Hospital Association it was reported that 293 churches

and synagogues had promised to make contributions this year. The reports from the various hospitals represented in the Association show that during the past three years \$201,651.44 has been expended on the enlargement of accommodations for patients; that there has been an increase in the income from invested funds of \$9780.12; that there has been an increase of income from paying patients aggregating \$43,036.72; that the increase of income from contributions toward current expenses other than derived from the Saturday and Sunday collection is \$22,774.84; that the total number of patients has increased from 8688 to 10,023, and that the total number of free patients has increased from 6698 to 7188. The statement is thus contradicted, which has been recently made in some quarters, and which is said to be based on London experiences, that the method of general collection fostered by this movement is inimical to the real interests of hospitals, in that it has a tendency to divert from them special gifts and bequests, because of the impression falsely conveyed that the one general collection is ample for the maintenance of all the hospitals benefited by it. The application of the New York Skin and Cancer Hospital for membership in the Association was formally acted upon.

— The twenty-ninth anniversary of the Woman's Hospital was celebrated at the wards of the institution on the 22d of November, when a bust of the late Dr. Marion Sims, by DuBois, of Paris, was presented by Mrs. Russell Sage, who said that it was almost thirty years since a memorable meeting was held in Stuyvesant Institute on Broadway, near Bond Street, and the outcome of that meeting was the Woman's Hospital, the first of its kind in the world. A physician, guided by the inspiration of the genius God had given him, had sought this city, bringing with him the results of faithful, conscientious toil which had achieved success in the cure of a pitiful and pitiless malady. It became their sacred duty to crown him Benefactor whom two continents had delighted to honor, and she hoped that the marble now presented would help to perpetuate in coming years the name of Dr. J. Marion Sims, the founder of the Woman's Hospital. After eulogistic remarks in regard to Dr. Sims by others, the report of the medical board was read, and showed that there had been 626 patients treated and 466 surgical operations performed in the hospital during the year ending October 1st; 4506 patients were treated in the out-door department.

— The fifteenth anniversary of the Presbyterian Hospital was held on the 18th. The principal address was delivered by the Rev. Dr. John Hall, who in the course of his remarks said that criticisms on the name of the institution as indicative of narrowness were disposed of by the annual report, which showed that of every hundred patients, fifty were Protestants of various other denominations, and the other fifty Roman Catholics.

— The twentieth annual meeting of the New York Society for the Relief of the Ruptured and Crippled was held at the hospital November 13th, when the medical report showed that during the year profes-

sional services were rendered 19,116 times to patients in the out-door department, and 126 visits made at the homes of those unable to attend at the hospital. The number of in-patients treated was 375.

— Dr. John C. Peters recently delivered a lecture on scarlet fever among horses at the Columbia Veterinary College, in which he made a more elaborate statement of his views than in his address at the annual meeting of the County Medical Society, his object being, as he remarked, to secure the coöperation of veterinary practitioners in investigating the subject, and its possible connection with the spread of the disease among human beings.

— The first case of small-pox in the city since last June was discovered by the sanitary authorities in a tenement house in West Fifty-ninth Street on the 16th of November. The patient had arrived from Ireland two weeks before.

— A public school situated in the Twenty-fourth Ward has been closed for a week by order of the president of the Board of Education in consequence of the death of the three children of the janitor of the building from diphtheria and the unusual prevalence of the disease in the neighborhood. All the children of the janitor were removed to another house as soon as the first case developed, but before the school is reopened the building is to be inspected, cleaned, and fumigated. The Health Board has not yet discovered that the Board of Education has adopted any radical measures in regard to seventy-five reports from sanitary inspectors setting forth that schools which had been inspected by them were unhealthy from defective ventilation, over-crowding, bad plumbing, and ill-constructed and ill-kept lavatories and closets.

— An outbreak of typhoid fever which is now in progress at Yonkers seems to be due to a great extent to contamination of drinking water, and the sanitary authorities have closed one public well into which there was found to be cess-pool drainage.

— Dr. D. A. Prohn has been fined \$100 for practicing medicine illegally. The diploma he presented was one of the fraudulent certificates issued by Paine's notorious "university" in Philadelphia some years ago.

MEDICO-LEGAL NOTES.

HYPERTROPHY OF THE PROSTATE FROM A FORENSIC POINT OF VIEW.

A QUESTION of some interest from a medico-legal point of view has recently been raised in connection with the criminal trial of a man, aged sixty-two, who was alleged to have banished his lawful wife, and filled her nuptial place by the substitution of his daughters, neither of whom was over twenty years of age. The specific charge of incest is not in point in the discussion, nor the claim of the girls that they yielded only to parental authority. The line of defense adopted for the accused was substantially that the sexual act could not have been performed because he was the subject of prostatic enlargement, which was in itself a bar to copulation inasmuch as it occa-

sions such pressure on the erectors penis as to draw the male organ downwards and render coitus impossible. The *Maryland Medical Journal*, November 17th, contains an article by Dr. Christopher Johnston in which this claim of the defense is discussed. Though the defense in this case was in many respects palpably lame, yet it suggests a point which in another case might have caused bewilderment of a jury. The death of the accused prevented the trial taking place, but an outline of the ground of defense had been made which the prosecution were prepared to meet.

In the first place it was denied that the defendant was the subject of prostatic enlargement, and an examination by experts was demanded, which the defense refused, claiming that such a condition was the regular thing in men of that age. On this point Dr. Johnston quotes many surgical authorities to the effect that prostatic hypertrophy is by no means the rule among old men, Sir Henry Thompson, for instance, declaring it to be present in only thirty-four per cent. of men over sixty. Moreover, the majority of writers, Astley Cooper being the principal exception, appear to believe this condition to be not so much the result of old age as of disease, and hence not to be presupposed by the mere fact of advanced years.

In the second place attention is called to the size attained by the organ in question, as also to the fact that whatever impediment is occasioned to the urinary flow none is alleged by any writers to exist to the generative act. In fact numerous authorities may be cited who speak of sexual excitability as a result of the enlargement of the prostate, and, conversely, one determining cause of the pathological condition in question is believed to be sexual excess. In fact, the concurrence of exalted sexual feeling with prostatic enlargement is much more frequent than any diminution of the former. Of course the advanced age at which prostatic hypertrophy is especially common is one when the sexual feeling naturally is to be expected to subside, and in certain cases the enlargement appearing at that time might suggest to the sufferer that it was the cause of his impotence. But evidence is wanting that the sexual function is any more impaired in old men with prostatic enlargement than in those of the same age who are free from it. The importance of the condition in question is held by all writers to lie chiefly in its effect on the urinary apparatus, and what sexual influence it does have is quite the reverse of what the defense in this case claimed.

Finally, as to the defense that the prostatic enlargement, by pressure on the ischio-cavernosi muscles, would draw the penis downward and render coitus impossible, it may be said that the function of these muscles is in dispute according to the different views of the method by which erection is normally effected. If one follows Quain's view of a passive congestion, due largely to compression of the base of the corpora cavernosa by these muscles, it is evident that a tension of the muscles such as the defense claimed would directly further erection. If, on the contrary, the process is considered more of an active congestion, due to dilatation of the sinuses through relaxation of

the trabecular muscular filaments, a tension of the ischio-cavernosus would conduce to erection according to Cruveilhier's view, for according to that author this muscle "acts solely upon the corpus cavernosum (of its side), drawing the root of the penis downward and backward; instead of compressing the root of the corpus cavernosum by the contraction of its fibres it tends, on the contrary, to dilate its cavity by separating the lower from its upper wall, and in this manner facilitates erection."

It would appear that the death of the accused was all that saved his counsel from disastrous failure in depending upon such a line of argument. Indeed, the suggestion occurs to one that a much more tenable defense in such a case, supposing prostatic hypertrophy to exist (which evidently would have to be established by examination, and could by no means be taken for granted from the age of the accused), would be that the disease of the prostate caused libidinous desires for which the accused was, therefore, not responsible. Erichsen says on this point:—

"The irritation of a congested and enlarged prostate will excite libidinous ideas in the aged, which may lead them to the perpetration of acts of indecency, such as exposure of the person, etc., or to a general impairment of the moral tone."

Correspondence.

PLAIN WORDS ABOUT THE MEDICAL REGISTER FOR NEW ENGLAND.

MR. EDITOR,—It may interest the readers of the *JOURNAL* to know that the *Medical Register*, which was started by me in 1873 as the *Medical Register for Boston and vicinity*, and has since expanded itself until it has become a professional handbook for regular medicine throughout New England, will be re-published within a few weeks, with appropriate additions, corrections, etc., to bring the book to date. The work is already under way, and reliable information and *subscriptions* will be called for at an early day. This work was undertaken and has been carried on by the author simply *for the good of the profession*. It offers no field for money making—*experto crede*—and all the author asks is that, in his next edition, he may be secured against making a loss. This can only be if the profession will come forward promptly, give him such information as is needed, and subscribe for, at the least, one copy apiece. The book will contain, in a small space, *a large amount* of information which every physician needs. It has been gathered with much labor, from sources inaccessible to the profession in general; and it will *pay* to own it.

The *Medical Register* will be issued at a rate lower than that of previous years, and will be offered by a well-known Boston house.

The announcement of a new edition is made at this time to correct the statements made by a person traveling in the interest of a New York firm for a *Medical Register of Boston*, who announces that the work, to which my name is attached, has ceased to exist.

FRANCIS H. BROWN, M. D.

Boston, November 30, 1883.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 17, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhoeal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	550	171	15.84	16.02	1.98	2.70	7.56
Philadelphia.....	846,984	350	118	17.69	16.24	—	3.48	8.99
Brooklyn.....	566,689	214	78	13.63	15.10	1.88	—	6.11
Chicago.....	503,304	181	77	26.25	17.25	8.25	3.75	9.75
Boston.....	362,535	136	48	26.25	16.00	8.00	3.50	9.75
St. Louis.....	350,522	133	40	27.74	8.03	7.30	2.32	7.54
Baltimore.....	332,190	159	56	26.46	15.12	1.89	4.41	8.19
Cincinnati.....	255,708	—	—	—	—	—	—	—
New Orleans.....	216,140	163	56	19.52	13.42	6.10	—	.61
District of Columbia.....	177,638	—	—	—	—	—	—	—
Pittsburg.....(1883)	175,000	55	14	13.34	18.18	1.82	1.82	—
Buffalo.....	155,137	50	14	10.00	12.00	4.00	—	—
Milwaukee.....	115,578	—	—	—	—	—	—	—
Providence.....(1883)	116,755	37	9	8.10	16.20	—	—	—
New Haven.....(1883)	73,000	29	5	17.85	10.71	3.57	7.14	3.57
Charleston.....	49,999	45	21	13.33	6.66	6.66	4.44	2.22
Nashville.....	43,461	16	4	18.75	6.25	6.25	—	—
Lowell.....	59,485	25	11	12.00	24.00	—	4.00	8.00
Worcester.....	58,295	13	8	38.45	15.38	7.69	—	23.07
Cambridge.....	52,740	10	2	—	20.00	—	—	—
Fall River.....	49,006	23	8	26.10	4.35	4.35	8.70	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	14	2	14.28	—	—	14.28	—
Springfield.....	33,340	11	3	27.27	9.09	—	9.09	9.09
Salem.....	27,598	11	2	—	9.09	—	—	—
New Bedford.....	26,875	15	1	20.00	33.33	13.33	—	6.66
Somerville.....	24,985	10	4	40.00	10.00	20.00	—	20.00
Holyoke.....	21,851	8	2	—	50.00	—	—	—
Chelsea.....	21,785	6	0	16.66	33.33	—	16.66	—
Taunton.....	21,213	5	2	20.00	—	—	—	20.00
Gloucester.....	19,329	2	1	—	50.00	—	—	—
Haverhill.....	18,475	5	1	—	—	—	—	—
Newton.....	16,995	5	2	—	—	—	—	—
Brockton.....	13,608	7	2	—	—	—	—	—
Newburyport.....	13,537	8	1	—	25.00	—	—	—
Fitchburg.....	12,405	4	0	—	—	—	—	—
Malden.....	12,017	2	0	—	—	—	—	—
Eighteen Massachusetts towns.....	136,589	41	11	4.88	10.88	—	—	4.88

Deaths reported 2343 (no reports from Cincinnati, District of Columbia, and Milwaukee): under five years of age, 774: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 427, consumption 337, lung diseases 276, diphtheria and croup 170, diarrhoeal diseases 74, typhoid fever 64, scarlet fever 41, malarial fevers 35, whooping-cough seven, erysipelas 10, measles nine, small-pox eight, puerperal fever seven, cerebro-spinal meningitis two. From *scarlet fever*, Philadelphia 17, Baltimore nine, New York six, Boston five, St. Louis four, Buffalo three, Chicago two, New Orleans, Pittsburg, Providence, New Haven, and Springfield one each. From *malarial fevers*, New Orleans 15, New York six, Brooklyn five, St. Louis four, Baltimore three, Philadelphia and Chicago one each. From *erysipelas*, Baltimore three, New York, Philadelphia, and Brooklyn two each, St. Louis one. From *measles*, New York four, Baltimore three, Brooklyn and Providence one each. From *small-pox*, New Orleans five, Nashville two, St. Louis one. From *whooping-cough*, Brooklyn three, New York and Philadelphia two each. From *puerperal fever*, Brooklyn, Chicago, Boston, St. Louis, Baltimore, and Worcester two each. From *cerebro-spinal meningitis*, Brooklyn and Providence one each.

Six cases of small-pox were reported in St. Louis; diphtheria 43, scarlet fever 43, typhoid fever 18, and measles seven in Boston.

In the 37 cities and towns of Massachusetts, with an estimated population of 1,420,336 (estimated population of the State 1,922,530), the total death-rate for the week was 12.81 against 17.50 and 19.08, for the previous two weeks.

In the 28 greater towns of England and Wales, with an esti-

mated population of 8,620,975, for the week ending November 3d, the death-rate was 20.1. Deaths reported 3328: acute diseases of the respiratory organs (London) 316, scarlet fever 139, diarrhoea 65, fever 72, measles 62, whooping-cough 44, diphtheria 21, small-pox (London and Birmingham three each, Wolverhampton and Liverpool one each, Sunderland four) 12. The death-rates ranged from 15 in Brighton to 30.2 in Preston; Birmingham 16.9; Bradford 17.1; Sheffield 18.7; London 19; Leicester 19.7; Nottingham 21.7; Liverpool 23; Leeds 24.3; Manchester 25.7; Newcastle-on-Tyne 26.2. In Edinburgh 19; Glasgow 25; Dublin 28.2.

For the week ending October 27th, in 170 German cities and towns, with an estimated population of 8,718,851, the death-rate was 22.3. Deaths reported 3732; under five years of age, 1736; consumption 488, lung diseases 344, diphtheria and croup 307, diarrhoeal diseases 163, scarlet fever 87, whooping-cough 68, typhoid fever 61, measles and röteln 47, puerperal fever 23. The death-rates ranged from 7 in Karlsruhe to 42.1 in Duisburg; Königsberg 34.6; Breslau 23.8; Munich 27.3; Dresden 23.6; Berlin 23.4; Leipzig 25.3; Hamburg 21; Cologne 20.6; Frankfurt a. M. 13.4; Strasburg 21.

For the week ending November 3d, in the Swiss towns, there were 26 deaths from consumption, lung diseases 16, diarrhoeal diseases 14, typhoid fever five, whooping-cough two, diphtheria and croup two, measles one. The death-rates were, at Geneva 17.4; Zurich 14; Basle 15.9; Berne 23.7.

The meteorological record for the week ending November 17th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps:—

Date.	Barom-eter.	Thermome-ter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Nov., 1883.																			
Sun., 11	29.852	51	58	47	96	66	100	86	SW	SE	S	5	6	3	O	O	O	—	—
Mon., 12	29.562	34	51	28	49	68	64	60	W	NW	W	17	25	29	O	O	O	—	—
Tues., 13	29.766	34	39	2	64	49	59	57	NW	SW	S	27	20	5	O	O	O	—	—
Wed., 14	29.801	37	46	28	83	46	54	61	SW	W	W	8	18	13	R	O	O	—	—
Thurs., 15	30.069	29	35	22	61	57	85	68	NW	E	SE	8	10	4	O	O	O	—	—
Fri., 16	30.211	25	34	22	73	56	58	62	NW	NW	W	9	18	10	O	O	O	—	—
Sat., 17	30.413	31	41	18	70	57	51	59	NW	SW	SW	8	13	14	F	C	C	—	—
Mean, the Week.	29.968	35	58	18				65										11.18	.11

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening. ² Instrument out of order.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 24, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Princip- al Infec- tious Diseases.	Con- sumption.	Typhoid Fever.	Diphtheria and Croup.	Diarrhoeal Diseases.
New York.....	1,206,590	601	201	26.63	18.87	1.66	6.97	2.89
Philadelphia.....	846,984	370	125	19.71	12.42	2.70	11.07	1.35
Brooklyn.....	566,689	207	67	16.80	18.92	1.44	7.20	1.44
Chicago.....	503,304	189	79	24.91	11.66	8.48	11.66	3.71
Boston.....	362,535	182	56	17.60	12.65	.55	6.20	2.20
St. Louis.....	350,522	143	55	28.00	8.40	1.40	16.80	3.50
Baltimore.....	332,190	160	59	22.05	19.53	1.26	7.56	1.89
Cincinnati.....	255,708	90	30	12.22	11.11	2.22	5.55	3.33
New Orleans.....	216,140	155	53	22.40	10.40	—	3.25	6.50
District of Columbia.....	177,638	89	34	15.68	11.28	1.12	3.36	2.24
Pittsburg.....(1883)	175,000	57	17	12.35	15.75	5.45	5.45	—
Buffalo.....	155,137	45	18	42.18	13.33	—	8.88	13.33
Milwaukee.....	115,578	39	19	17.92	12.80	5.12	5.12	—
Providence.....(1883)	116,755	40	8	12.50	27.50	5.00	2.50	2.50
New Haven.....(1883)	73,000	—	—	—	—	—	—	—
Charleston.....	49,999	51	16	15.68	23.52	3.92	7.84	—
Nashville.....	43,461	26	6	11.55	24.80	7.70	3.85	—
Lowell.....	59,485	22	11	22.75	9.10	—	18.20	—
Worcester.....	58,295	26	—	19.25	15.80	—	7.60	3.85
Cambridge.....	52,740	25	9	12.00	12.00	—	8.00	—
Fall River.....	49,006	20	—	20.00	20.00	10.00	5.00	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	17	7	11.76	23.52	11.76	—	—
Springfield.....	33,340	—	—	—	—	—	—	—
Salem.....	27,598	5	0	—	—	—	—	—
New Bedford.....	26,875	11	6	9.09	—	—	9.09	—
Somerville.....	24,985	5	0	—	60.00	—	—	—
Holyoke.....	21,851	9	6	22.22	11.11	11.11	11.11	—
Chelsea.....	21,785	12	1	—	25.00	—	—	—
Taunton.....	21,213	7	1	28.56	14.28	14.28	—	14.28
Gloucester.....	19,329	5	0	—	40.00	—	—	—
Haverhill.....	18,475	4	0	—	—	—	—	—
Newton.....	16,995	6	0	16.66	16.66	—	16.66	—
Brockton.....	13,608	9	3	11.11	33.33	—	—	11.11
Newburyport.....	13,537	7	1	28.56	14.28	—	28.56	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	3	0	—	—	—	—	—
Twenty-six Massachusetts towns...	170,457	59	10	1.69	11.83	1.69	—	—

Deaths reported 2696 (no report from New Haven): under five years of age, 898: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 522, consumption 418, lung diseases 297, diphtheria and croup 213, diarrhoeal diseases 69, typhoid fever 65, scarlet fever 65, malarial fevers 42, whooping-

cough 20, measles 18, small-pox 11, cerebro-spinal meningitis eight, erysipelas seven, puerperal fever three, typhus fever one. From scarlet fever, Philadelphia 14, New York and Buffalo nine each, Boston eight, Baltimore six, Brooklyn and Chicago five each, St. Louis two, Cincinnati, District of Columbia, Milwaukee, Providence, Lowell, Worcester, and Cambridge one each.

From *malarial fevers*, New York 14, New Orleans nine, Brooklyn and St. Louis six each, Baltimore three, Charleston two, Philadelphia and Chicago one each. From *whooping-cough*, New York eight, Brooklyn three, Boston, Baltimore, and New Orleans two each, Philadelphia, District of Columbia, and Milwaukee one each. From *measles*, New York seven, District of Columbia six, Chicago and Baltimore two each, Pittsburg one. From *small-pox*, New Orleans 10, Philadelphia one. From *cerebro-spinal meningitis*, New York and Chicago, three each, Worcester and Fall River one each. From *erysipelas*, Baltimore five, Boston two. From *puerperal fever*, Chicago, Boston, and St. Louis one each. From *typhus fever*, Milwaukee one.

Nine cases of small-pox were reported in St. Louis; Boston one; scarlet fever 44, diphtheria 28, typhoid fever 23, measles two in Boston; diphtheria 25, and scarlet fever 19 in Milwaukee.

In the 45 cities and towns of Massachusetts, with an estimated population of 1,208,250 (estimated population of the State 1,922,530), the total death-rate for the week was 18.59 against 12.81 and 17.52 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending November 10th, the death-rate was 21.5. Deaths reported 3547: acute diseases of the respiratory organs (London) 365, scarlet fever 160, fever 76, measles 70, diarrhoea 65, whooping-cough 49, diphtheria 34, small-pox (London two, Birmingham and Sun-

derland one each) four. The death-rates ranged from 13.4 in Derby to 31.4 in Newcastle-on-Tyne; Leicester 18.1; Birkenhead 18.8; Nottingham 19.1; Bradford 19.4; Birmingham 19.9; Sheffield 20.1; London 20.5; Liverpool 24.7; Manchester 27.8; Leeds 28.1. In Edinburgh 22.1; Glasgow 23.3; Dublin 25.8.

For the week ending November 3d, in 166 German cities and towns, with an estimated population of 8,702,430, the death-rate was 22.6. Deaths reported 3780; under five years of age, 1170; consumption 444, lung diseases 303, diphtheria and croup 269, diarrhoeal diseases 162, scarlet fever 118, typhoid fever 82, whooping-cough 64, measles and röteln 55. The death-rates ranged from 12.1 in Darmstadt to 34.3 in Posen; Königsberg 35.5; Breslau 29.1; Munich 23.8; Dresden 25.4; Berlin 25.3; Leipzig 24.7; Hamburg 18.2; Cologne 21.3; Frankfurt 17.1; Strasburg 19.1.

For the week ending November 10th, in the Swiss towns, there were 22 deaths from consumption, lung diseases 20, diarrhoeal diseases nine, diphtheria and croup four, whooping-cough two, erysipelas two, typhoid fever one, scarlet fever one. The death-rates were, at Geneva 9.2; Zurich 8; Basle 15.1; Berne 21.5.

The meteorological record for the week ending November 24th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 18	30.315	41	55	30	60	41	73	58	SW	S	S	8	8	4	O	C	C	—	—
Mon., 19	30.338	46	60	33	72	47	68	62	SW	SW	W	4	4	4	C	C	F	—	—
Tues., 20	30.361	44	55	37	75	77	95	82	O	SE	SW	0	5	7	C	O	C	—	—
Wed., 21	30.215	57	44	66	96	75	93	88	S	SW	SW	7	14	10	O	C	C	—	—
Thurs., 22	30.019	62	69	55	90	75	90	85	SW	SW	SW	13	13	6	F	F	O	—	—
Fri., 23	30.103	50	61	42	93	83	94	90	SW	NE	NE	14	15	14	L R	O	O	—	—
Sat., 24	30.183	43	47	42	100	100	100	100	E	NW	W	7	5	8	R	O	C	—	—
Mean, the Week.	30.219	49	69	30				80.7										10.30	.17

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 1, 1883.

KINDLEBERGER, D., medical inspector, to be relieved from duty on the Retiring Board on December 9th.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 23, 1883, TO NOVEMBER 30, 1883.

WOLVERTON, WILLIAM D., major and surgeon. Assigned to duty as post surgeon at Washington Barracks, D. C. Paragraph 7, S. O. 222. Department of the East, November 27, 1883.

BROWN, PAUL R., captain and assistant surgeon. Assigned to duty in the Department of Arizona. Paragraph 4, S. O. 273. A. G. O., November 29, 1883.

MERRILL, JAMES C., captain and assistant surgeon. Relieved from duty in the Department of the East, and assigned to duty at Columbus Barracks, Ohio. Paragraph 4, S. O., 270. A. G. O., November 24, 1883.

APPEL, A. H., first lieutenant and assistant surgeon. Relieved from duty at Fort Warren, Massachusetts, and assigned to duty at Madison Barracks, N. Y. Paragraph 4, S. O. 217. Department of the East, November 21, 1883.

BREWSTER, WILLIAM B., first lieutenant and assistant surgeon. Extension of leave of absence granted September 15, 1883, further extended two months. Paragraph 4, S. O. 271. A. G. O. November 26, 1883.

MADDOX, THOMAS J. C., first lieutenant and assistant sur-

geon. Granted leave of absence for two months. S. O. 136. Department of the Missouri, November 24, 1883.

SUFFOLK DISTRICT MEDICAL SOCIETY.—The Section for Clinical Medicine, Pathology, and Hygiene will meet at 19 Boylston Place, on Wednesday, December 12th, at 7.45 o'clock. The following papers will be presented: Dr. G. M. Garland, The Treatment of Follicular Tonsillitis. Drs. F. I. Knight, S. W. Langmaid, and J. P. Oliver will open the discussion. Dr. E. O. Otis, The Use of Tobacco Among Boys. Dr. H. I. Bowditch and Dr. A. C. Gorgas (Medical Inspector, U. S. N.) will open the discussion. H. A. Baker, D. D. S., will exhibit an improved appliance in the physiological treatment of Cleft Palate, illustrated upon a patient. ALBERT N. BLODGETT, Secretary.

BOOKS AND PAMPHLETS RECEIVED.—The Oyster Epicure. A Collation of Authorities on the Gastronomy and Dietetics of the Oyster. New York: White, Stokes & Alden. 1883.

Sepulture: its History, Methods, and Sanitary Requisites. By Stephen Wickes, A. M., M. D. Philadelphia: P. Blakiston, Son & Co.

Manual of General Medicinal Technology, including Prescription-writing. By Edward Curtis, A. M., M. D. New York: Wm. Wood & Co. 1883.

A Handbook of Therapeutics. By Sydney Ringer, M. D. Tenth Edition. New York: Wm. Wood & Co. 1883.

A Case of Severe Purulent Inflammation of the Middle Ear, with Restoration of the Drum-head. By Edward S. Peck, M. A., M. D. Reprint. New York.

Original Articles.

16 JAN 31

TINNITUS AURIUM AND VERTIGO AS PROMINENT SYMPTOMS OF LITHÆMIA.

BY GEORGE H. LYMAN, M. D.,
Physician to Boston City Hospital.

THERE is perhaps no class of patients coming under a physician's observation which are more troublesome than those cases of gastric and hepatic derangement due to the lithic acid diathesis so-called. The functional disturbances are so associated with nervous phenomena as to render the sufferer impatient and intractable, skeptical of your assertion that he has no serious organic disease, and ready to try every nostrum and accept every diagnosis but the true one from the numerous professional and lay friends whose sympathy he seeks.

Although lithæmia, lithuria, lithiasis, etc., have now become tolerably familiar terms to the profession, the whole subject still remains more or less obscure; especially the subjective semiology and the relative importance of the renal and hepatic pathology. The true nature of the affection often escapes recognition by the medical adviser until some case presents itself which cannot be ignored, when he is forced to closer inquiry into the antecedents and a more rigid analysis of the symptoms. He then discovers that he has to deal with something more than a mere gastric derangement, indigestion, dyspepsia, or what not, vague terms with which he has temporarily satisfied his own conscience and his patient's importunities; his blue pill and pepsin, his alkalies and sedatives, either separately or in some incongruous combination, have generally been a lamentable failure. In mild cases, to be sure, the mark is occasionally hit by some snap shot, but when the patient, superadded to his other grievances, has an incessant tinnitus, he loses faith in the stomach doctrine, or if his memory begins to suffer, or he has occasional attacks of vertigo, so sudden and severe as to make him unwilling to trust himself alone in the street, what wonder that he should seek other and special skill in brain, heart, eye, or ear, to the great discredit of the general practitioner; for though he may get no more relief by the change, his subjective symptoms get more direct attention and he, at any rate, is for the time being satisfied that merely local treatment is exactly what he needs.

While the first of the following cases was under observation the admirable article of Dr. DaCosta appeared in the October number of the *American Journal of Medical Sciences* for 1881, in which these nervous phenomena especially are brought more prominently forward than in the famous Croonian Lectures of Dr. Murchison, which have done so much by stimulating inquiry to develop our knowledge of these lithæmic conditions. Although I cannot hope to add anything to the value of Dr. DaCosta's paper, possibly some allusion to a series of my own cases may be of interest to others.

The disorder in question has no fixed set of symptoms. The subjective expression of the pathological condition may manifest itself in protean forms. Either the gastric, rheumatic, renal, hepatic, cerebral, or cardiac, or several of them combined, may seem to predominate in any particular case, yet each is dependent

in great measure upon certain lithuric conditions, which, being neglected, render any treatment unsatisfactory if not wholly useless. It is not necessary that nausea, constipation, or diarrhoea, headache, insomnia, or palpitations, myalgic pains, or urinary deposits, should all be present in any given case; the subject of it indeed is quite likely to express himself as being otherwise in good health and strength, vigorous in mind and body, and yet so tormented at times, and apparently without cause, with one or more of the functional nervous phenomena described, as to induce in him the fear of some fatal organic defect of heart or brain.

Of the varied symptoms none are more distressing than the two which are the more immediate subject of this paper: a constant tinnitus aurium from which there is no escape during the waking hours, and which indeed often interferes with the sleep, — buzzing, ringing, clicking, or constant pulsation, for which no visible nor tangible cause can be discovered either in gastric disorder or the external and internal auditory apparatus, — is not only a constant source of annoyance but of serious apprehension to its unfortunate possessor; or still more if either with or without this tinnitus the victim finds himself the subject of sudden attacks of vertigo, so severe and decided as to cause a staggering gait, possibly complete prostration, as an attack of epilepsy, the case assumes a gravity which startles and terrifies its subject into fear of impending death.

In one case a young, active, business man, apparently in vigorous health, in addition to some of these symptoms finds his memory failing to such a degree as to impair business efficiency; he cannot recall the prices of his goods, the daily changes in stocks, etc., and fancies that he is threatened with paralysis, brain softening, or some dire evil which is to bring ruin upon him.

Another will have renal complications dependent wholly upon some hepatic derangement of function which sends him from one physician to another in the hope of relief to his fear of Bright's disease, diabetes, or cystic calculus, while still another may be complicated solely with tormenting muscular or arthritic pains. And so on one might recall instances of one or more of these with the addition of purely nervous complications, simulating to the fears of the patient almost every conceivable organic disease.

The first of the ensuing cases only is given in some detail, it being a striking instance of the disorder, and one which with its coincident organic cardiac complication might well have caused much concern to both physician and patient, but which, when its true nature was appreciated, proved to be susceptible of prompt and effectual relief.

Dr. —, who had been in active practice for twenty-five years, about 1871 was attacked suddenly, after a moderate lunch, with vertigo so decided as to necessitate the recumbent posture, and cause great alarm to his family. There was no actual syncope, but a distressing sense of faintness, from which, however, he recovered in a few minutes; there was neither nausea, palpitation, nor headache. The attack was at the time attributed to lager beer, not very fresh, taken with the lunch. In early life, while a medical student, he had suffered from a bad attack of endocarditis entailing mitral disease during the course of a severe rheumatic fever. Three or four years later he had a second rheumatic seizure, very severe, and lasting, with little intermission, for six weeks, but without any addi-

¹ Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, November 14, 1883.

tional cardiac complication. Since these attacks any unusual exertion has inevitably induced palpitations and dyspnoea, but with the precautions which his professional knowledge indicated these attacks were infrequent, giving but little trouble and no apprehension. At about the period of the first vertiginous seizure he began to be troubled with tinnitus, but at rare intervals, and coincident with catarrhal attacks, nasal and faucial. For a time this attracted little attention, but subsequently became more frequent and annoying until, at the end of some years, the tinnitus became almost constant through the day, and at night was frequently so annoying as seriously to interfere with sleep. Consulting his friends specially skilled in aural affections, it was by all agreed that the cause must be attributed to an extension of the catarrhal congestion to the middle ear, with fibroid thickening of the canal, and that in view of its long duration little encouragement could be given for its permanent relief. The verdict was, perforce, accepted, and for years the continued singing was endured with such philosophy as could be mustered, though occasionally the pulsations would become so aggravated as to be almost unendurable. From 1871 to 1879 occasional attacks of vertigo occurred, but generally late in the evening, and after days of unusual fatigue. These were always temporarily relieved by a drachm or two of any mild stimulant. The attacks were at one time thought to be possibly due to his habit of smoking, but no direct relation could ever be traced. In 1879, when leaving the water-closet one morning, a sudden and severe attack occurred with distressing faintness and prostration, though the pulse was of good strength, and there was no palpitation. Some time elapsed before he was able to leave the floor for a couch, and subsequently to resume his daily work, in the pursuit of which he now, for the first time, noticed that his gait was uncertain. For the ensuing two years there were no more or only very slight attacks of vertigo, but the sense of inability to walk straight was more or less manifest, and at times to so great a degree as to make him fear the charge of intoxication. The staggering could only be overcome by stopping, sitting down, or grasping the first tree or fence for a few minutes.

Finally, in October, 1881, when apparently perfectly well, there being neither gastric nor cardiac symptoms, a very sudden and severe attack of vertigo occurred while walking through a hospital ward, and a chair at hand alone prevented his falling. The faintness was relieved by a swallow of brandy, and the visit finished without difficulty.

Matters had now assumed so grave an aspect that he began seriously to study his own case, as he would have been compelled to do in the case of any other patient. First the condition of the heart was investigated as a possible cause, but competent examination revealed no increase of the old mitral disease, no evidence of fatty degeneration, the pulse in fullness, frequency, and rhythm normal, neither palpitations nor dyspnoea. No evidence whatever of any organic cerebral disorder. The renal function was apparently perfect; the urine of proper specific gravity, and normal in quantity, although there was a tendency to abnormal acidity. In the absence of any deposit or other symptoms the urine was only roughly tested at any time; unfortunately no accurate analysis was ever made. The digestion was vigorous; the bowels, as always during life, regular with exceptions noted hereafter. I should

now state that since the two rheumatic seizures in early life, above mentioned, he has been subject to frequent attacks of pain and swelling in the small joints of hands and toes, more especially the former, and also to myalgia in shoulders, loins, and hips. These have never been accompanied by fever nor by any severe disturbance of the general health, but always by extreme irritability, nervousness, and impatience, with more or less torpor of the bowels. The appetite, even in the worst of these, was always good enough, if not too good. These attacks were usually directly traceable to indulgence in certain articles of food or drink, and never found susceptible of mitigation by drugs of any kind until these special things were omitted for a time. Half a bottle of claret or burgundy, for instance, would almost certainly induce redness, swelling, and pain in the knuckles, sometimes on a single trial, more often at the end of a few days; strawberries always, and most other fruits if eaten after meridian; malt liquors of any kind if used continuously; while, on the other hand, the moderate long-continued use of brandy, whiskey, thin, dry sherry, or dry champagne agreed perfectly if taken in moderation with dinner.

The sharp gouty pains and enlargement and redness of the smaller joints in connection with the nervous irritability suggested, of course, the lithic acid diathesis, and careful continued observation proved a direct connection between the exacerbations and increased tinnitus and vertigo.

A more careful course of diet was at once instituted. The amount of nitrogenous and carbonaceous food was greatly reduced, and all stimulants and malt liquors, always in daily, but never in excessive, use, were discarded entirely. As medicines a full dose of citrate of lithia was given before each meal, and an active dose of bitter water on rising each morning, the latter producing one full liquid evacuation daily. The effect of this course was very decided. It was continued with hardly an intermission for four months, though on several occasions, when too much animal food or a glass or two of claret, sherry, or madeira were indulged in, the warnings were unmistakable. At the end of this period the tinnitus was hardly noticeable, the vertigo entirely gone, and the gouty pains a thing of the past. For the past year his health has been more vigorous than ever, but only at the price of constant watchfulness, for any attempt at the indulgences of the table, either at once or with the lapse of two or three days, brings its penalty in arthritic pain, tinnitus, or vertigo, one or all.

The only wines that seem to cause no trouble are a thin table sherry and dry champagne. Better than either is a tablespoonful of brandy with dinner, which seems to be not only harmless but a positive benefit.

I make no apology for giving this case at some length, as I consider it to be a good illustration of a certain class of lithæmic cases, and typical of the nervous and gouty complications while remarkably free from those renal and gastric symptoms which more generally accompany and obscure the diagnosis; for, as will be noticed, there were none of the ordinary symptoms to call attention to what was undoubtedly the true source of the difficulty, the imperfect assimilation of the ingesta. That vertigo and tinnitus as well as other obscure and intractable complaints, especially those of the skin and mucous membranes, may often be traced to this so-called lithuric condition, whether it be designated as lithæmia or suppressed gout, there can be

no doubt. I could give from my notes many other cases in which the relief from distressing symptoms of long duration, and where the sufferers had become almost hopeless of relief, would be shown, but the narration would serve no other purpose than to lengthen this already tedious paper, if given in detail. I will merely allude to a few of them, as showing some of the common differences in type:—

I. The son of a physician, married, aged forty-six, a high liver, had for three years been subject to these nervous symptoms. In this case renal congestion was so marked a feature as to cause apprehension of some organic disease of the kidneys. Under proper treatment the functions of the liver were restored, the nervous and renal symptoms disappeared, and he regained, and so far as I know is still in, comparatively vigorous health.

II. A perfectly temperate man aged fifty-six, was for two years subject to vertigo. He had also muscular debility, nausea, and some anasarca. Under careful regulation of the diet, free action of the bowels, nitromuriatic acid, etc., the vertigo and muscular weakness disappeared and his apprehensions with them.

III. A lady of middle age, with some suspicious renal symptoms, headache, nausea, cedema, etc., was under my care at intervals for two years. Early in 1882, though much improved in many respects, the nausea especially having nearly disappeared, she consulted me again for frequent and painful micturition and incessant tinnitus aurium. By the use of lithates with whiskey and cream and a restricted diet, iron and aloes, and bitter water, she obtained relief from all the nervous complications.

IV. A well-nourished and apparently vigorous man of thirty-two, in active mercantile life, complained bitterly of seminal emissions and loss of venereal appetite but chiefly of a constant sense of cerebral confusion, with loss of memory, at times so absolute that he could not remember the prices of his merchandise or make simple arithmetical calculations. He was married, and of steady habits, excepting that his meals were irregular and hastily eaten. He suffered to a slight degree from hæmorrhoids and headache. The emissions proved to be trifling and distinctly prostatic, not seminal. As he was an excessive smoker, tobacco was forbidden, and with proper regulation of the quantity and quality of his diet and the use of saline laxatives and mineral tonics, the unpleasant cerebral phenomena were relieved entirely and permanently, a year having now elapsed without any recurrence.

V. While writing this paper a somewhat similar case occurs to me, not of vertigo but of most unpleasant cerebral confusion, occasional attacks of distressing tinnitus, with muscular pains, tenderness and swelling of the small joints, and an increased renal secretion, with painful micturition. There has also been on several occasions a decided loss of power in the extensors of the fore-arm. The patient has been under my charge at intervals for ten years, and has had repeated recoveries from and recurrences of these symptoms, and will probably continue to have them to the end, for being of ample means and extremely indolent habits the requisite perseverance in treatment is not attainable. It is sufficient to say that the tinnitus and other symptoms in her case always and readily yield to the treatment indicated so long as it is persevered in.

VI. I will allude to but one more. An old gentleman past seventy has been for many years a notable

specimen of the hypochondriac. He has, however, certain difficulties that are not imaginary, especially prostatic enlargement in an aggravated degree. He has for years suffered from tinnitus, slight vertigo, palpitations, and an aggravated catarrh of all the mucous membranes from the *alæ nasi* to the pylorus. He was under my care for a year or two before I could get him under decent control. He was depressed, skeptical, sure that he was to lose his mind or die suddenly of apoplexy or heart disease, would follow a prescription for a day and then seek another; buy every quack medicine that was recommended (and serve it, fortunately, in the same way), until finally, under the threat that I could or would do no more, a promise of obedience was exacted and tolerably kept until now, under comparatively simple treatment, life is no longer a burden to him or his friends, the tinnitus and vertigo, the catarrhal troubles and cardiac irregularities, being immensely relieved.

The object of this paper is to call attention to those lithæmic cases in which tinnitus and vertigo are prominent symptoms, they being the most alarming and distressing to the patient of the nervous phenomena induced by an excess of lithic acid in the blood.

Many cases of tinnitus, no doubt, are temporary, such, for instance, as are caused by slight gastric derangement, an excess of ceruminous deposit, local congestions, etc., while other and incurable cases are due to actual organic changes in the auditory apparatus, and the same remark will apply to many cases of vertigo, whether from an acid stomach or actual fatty degeneration of the circulatory apparatus; but other than these, I can recall many instances occurring in former years, where, not suspecting what I now believe to have been the true cause, I was unable to afford that relief which I am confident would have followed a more accurate diagnosis.

How in deranged function of the liver imperfect disintegration and oxidation of the albuminoids results in the excess of lithic acid in the blood is a physiological problem, for the discussion of which I must refer to Flint, Draper, Bence Jones, Fothergill, Charcot, Murchison, and many others. The opinions of writers and experimenters are as yet quite at variance upon many points. A few remarks only are needed in this connection for the purposes of this paper.

And first, it is not sufficient to say that tinnitus is due to deranged circulation or irregular muscular action, for though both are probably true, what is the cause of those derangements; and so of vertigo? We must go farther back and find what causes are at work in the blood to influence the vaso-motor and trophic processes. An embolus in the middle cerebral we say results in aphasia, but we mean that aphasia is due to deficient nutrition in the brain cells.

That an excess of nitrogenous and carbonaceous foods, or, there being no excess, a relative deficiency of oxygen, results in imperfect oxidation seems probable. Were the oxidation complete, instead of insoluble lithic acid we should get soluble urea for normal elimination by the kidneys.

On the other hand, we have the opposite view¹ that an undue prominence has been given to uric acid in these gouty or lithæmic cases; that the difficulty rests rather with its insolubility than in its excessive production; that it is a consequence rather than a cause; and that the saccharine rather than the nitrog-

¹ See Ralfe on Morbid Urine, pages 65-98.

enous elements of the food are the most mischievous. However this may be, the kidneys seem to play an eliminatory rôle chiefly, although it must be remembered that the necessary excess in activity may lead eventually to chronic congestion and secondary organic changes of structure.

The vaso-motor and trophic influences, the mode of distribution, as well as the nutritive quality of the blood, become also important factors in the production of the cerebral symptoms under discussion. If the blood of the living body should be always alkaline it is not difficult to see that an abnormal excess of lithic acid would create these vaso-motor or trophic disturbances, one or both, in the circulation and nutrition of the brain and cord, a diminished alkalinity, whether relative or absolute, diminishing the contractility of the heart.

As to treatment, it is already sufficiently indicated, if we accept the theory of the lithæmic origin of the trouble. That the liver may rest from its overcharged labor, saccharine, nitrogenous, and alcoholic ingesta must be diminished, both sedentary habits on the one hand and excessive fatigue on the other, and over cerebral exhaustion from study or worry avoided, they all tending to weaken the circulation, and so favor acid accumulation.

With regard to the use of tonics, mineral or vegetable, they are often worse than useless, especially in the early stage of average cases, in which, with a careful diet, mild saline laxatives perseveringly used are the best tonics. In anæmic or broken-down cases their use may be, of course, a necessity.

In most cases alkaline salts are indispensable, and of these I have found citrate of lithia as useful as any, and perhaps the most agreeable to the stomach, although occasionally it overstimulates the kidney and must be suspended for a time, or replaced by soda or potash, taken an hour after meals, these being in all cases preferable when much flatulence is complained of. Salicylate of lithia I have not yet tried.

Where the pain is myalgic, muriate of ammonia in full doses will often give prompt relief, though if this result does not follow within a day or two, its continuance is useless. I have found no benefit from it in arthritic pain, or tenderness. Mercurials, podophyllin, colchicum, etc., must, I think, be rarely needed, and are objectionable from their depressing effect. Their influence upon the biliary secretion is at least questionable, and if the small intestines are kept free from biliary accumulation by saline or other laxatives, such as ipecac, rhubarb, and soda, they are not required. If there be any one thing which I should lay the most stress upon throughout the treatment, it would be the use of aperient bitter waters. Nothing proves so promptly effectual in removing those exacerbations of arthritic tenderness, vertigo, and tinnitus, which the most tractable patient will occasionally bring upon himself by some indiscretion, as an extra dose of Hunyadi or Pullna water taken for a day or two in the morning fasting. By an extra dose I mean a larger and more active one, for I would have a smaller dose of the same used almost continuously and for months after the cessation of the urgent symptoms. These waters keep the small intestines free, and the sulphates of soda and magnesia with which they are highly charged have a cholagogue influence which goes for something. Their influence as combined in these waters is decidedly more

satisfactory than when taken alone. The Carlsbad or Sprudel salts may also be mentioned in this connection, especially as they have been recently discovered to contain lithia, which the others do not.

The aggravated catarrhal complications may now and then require especial treatment, but in a large proportion of cases the troublesome nasal and faucial congestion will be found to yield with the lithæmia on which it depends.

As to the use of stimulants most patients are probably better for entire abstinence, but in a certain class such abstinence can with difficulty be enforced. I know of no rule by which one can be guided but the experience of the patient himself. As a rule, of the light wines the driest are the best. One will drink claret with impunity, while to others it is an undoubted poison, and the same may be said of champagne, burgundy, hock, etc. Climate and especially hygrometric conditions become here, I believe, an important factor. It is now a well-known fact that a patient will indulge with impunity in England or on the Continent in beverages both in quantity and in quality which in our drier climate cannot be assimilated. The first case reported was a striking instance of this, as was proved by his experience in repeated visits abroad.

In certain cases stimulants with iron or bark and acids may, as I have said, become a necessity, especially if the alkaline treatment induces any marked impoverishment of the blood, for in all cases a lowering treatment is to be avoided. It must not be forgotten that one's living may be generous without being excessive in either food or drinks.

The patient should always be made to understand that the relief which he may receive is to be permanent only so long as the conditions of the cure are complied with, and that any indulgence or excess will almost inevitably be followed by its penalty, and moreover, remembering that too frequent recurrences of merely functional disorder are likely to result eventually in actual organic changes no longer amenable to curative treatment.

In conclusion I may be permitted to say that while the pathology of these affections remains as at present an open question with different observers, the successful treatment of a series of cases may help materially in its solution. Where medical science is defective medical art may assist in placing it upon a right foundation.

RECENT VIEWS RESPECTING THE DIAGNOSIS AND TREATMENT OF LITHÆMIA.¹

BY JAMES J. PUTNAM, M. D.

It is well known that a tendency has been manifest of late among medical men in this country, as for a long time past in England, to diagnose as suppressed gout, or lithæmia, cases presenting a great variety of nervous symptoms, often anomalous and distressing in character, generally occurring in patients of gouty, but sometimes even in those of non-gouty, descent.

This tendency has been met in many quarters with incredulity, and some men of conservative temperament would be well content to let the matter slip by with a verdict of non-proven. Where no overt gout exists it is gratuitous to assume suppressed gout, they

¹ Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, November 14, 1883.

say, and the argument seems especially applicable to this country and generation, in which overt gout is so rare. Such an attitude seems to me to involve the disregard of clinical facts of manifest importance, yet I admit that even this is better than to abandon one's adherence to the laws of evidence for the sake of a plausible hypothesis. It is evident that there is a middle ground to be discovered, and it is important, in the interests of practice as well as theory, that its limits should be defined as accurately as possible.

Two questions naturally suggest themselves for solution in this connection; first, what are the ascertained facts in the matter; second, what are the inferences which involve the least infraction of sound reasoning.

The conclusions which seem to me the best established are:—

(1.) That various nervous symptoms, and symptom-groups (as well as certain affections of the skin and mucous membranes) may be due to disorders of nutrition of the body at large, and are best treated from that stand-point.

(2.) That, however, it has not been shown, nor rendered especially probable, that these symptoms are apt to be due to an excess of uric acid in the blood, except in so far as they occur in true gout.

(3.) That the effects of treatment in cases of so-called lithæmia are not such as to lend much support to the belief that it is a specific disease.

(4.) That there is abundant justification by analogy for the view that the impaired health found in the families of gouty persons need not itself be of a gouty nature.

(5.) That most, if not all, of the so-called lithæmic symptoms may and often do originate in a primary disorder of the nervous system (including true neurasthenia).

It will be worth while, to begin with, to glance briefly at the few advances which have been made in the pathology of true gout during the past few years.

It is well known that the one discovery bearing on this subject which has been able to maintain itself, almost unassailed, is that announced by Garrod in 1848, that the blood of gouty patients contains uric acid.

The explanations by which he proposed to account for the outbreaks of the disease, namely, that diminished excretory power of the kidneys caused a further accumulation of the uric acid in the blood, and that diminished alkalinity of the blood caused the precipitation of urate of soda in the tissues, have not fully stood the test of criticism. They remain as unproved, indeed as improbable, though noteworthy speculations.

It is, however, worth bearing in mind that diminished alkalinity of the blood such as is supposed to arise from dyspepsia with constant formation of acid products in the intestinal tracts, though it may not cause gout or lithæmia, has been regarded as accounting for a variety of nervous symptoms such as are usually attributed to suppressed gout. This is a view taken, for example, by Dr. Ralfe in his interesting little book on Morbid Urine.

Garrod's original researches left the origin of the uric acid unknown, though he believed that the kidneys themselves should be exonerated.

In 1874 Murchison delivered his able and suggestive Croonian Lectures on Functional Diseases of the Liver, and then first proposed, I believe, the term *lithæmia*. Murchison's aim was to show that, among its other important functions, the liver was the great laboratory for the conversion of nitrogenous compounds

into urea, and inasmuch as uric acid resembles urea except in containing less oxygen, and may even be converted into urea, it was maintained that uric acid was one of the suboxidation products of albumen-metabolism, and that the liver might be considered responsible for all the range of diseases, from chronic bronchitis and dyspepsia to gout and chronic Bright's disease, which could be laid to the door of the baneful uric acid and its congeners in the blood.

The liver is still admitted to be the seat of much chemical change, and the efforts of Murchison no doubt did much to clear its somewhat rusty clinical reputation, and to call general attention to its important functions and diseases. Yet, in spite of the guarded support of Charcot a few years later, Murchison's theory of hepatic lithæmia has not taken the place in pathology which its author claimed for it. The suboxidation part of it, which is for us the important portion, deserves especial consideration, since it concerns the doctrines of the treatment of gout as well as of its pathology.

It is now almost universally regarded as probable that in health uric acid and urea are parallel and normal products of albuminous disintegration, and not simply representatives of different states in one process.¹ Increasing the oxygen supply makes no difference in the oxidation of uric acid. The amount of oxygen in the blood does not in fact determine the amount of chemical change in the body, but is determined by it, the oxygen being called in only to repair the waste already caused.² The oxidation of nitrogenous compounds is a function of the tissues, and its activity is measured by the number and efficiency of the cells of which the tissues are composed. The oxygen by which this is accomplished is stored up in the tissues. The oxygen in the blood serves to feed this reservoir, but to this end there is always enough unless the blood is actually starved, as in asphyxia.³ Similarly, the reason why carbonaceous food is not good for gouty persons (when such is the case) is not because it attracts the oxygen which would have gone to complete the oxidation of the albumen, but for more complex reasons.⁴

Setting aside, however, the special question of the relation of uric acid to urea, it is quite true that the general doctrine that disease of various kinds (renal, among the rest) may arise from the presence in the circulating fluids of the results of imperfect metamorphosis of food, still holds a respected place among pathologists, as an important, although as yet unproved, hypothesis. As a practical matter, it is certainly very proper that in any doubtful case we should make every effort to improve the efficiency of the tissues to convert and assimilate food, both directly, by acting on the tissues and the circulation, and indirectly, by modifying the quality and quantity of the food, and there are good clinical reasons for thinking that in this way we shall often succeed in removing obscure nervous symptoms, but this admission is by no means equivalent to the adoption of the prevailing theory of lithæmia.

Within the past year our knowledge of the gouty processes has been enriched by two important investigations, carried on respectively by Garrod,⁵ and by Ebstein,⁶ Professor of Clinical Medicine in Gottingen.

¹ Vide for ex. Cohnheim's Handbuch des allgem. Pathologie.

² Voit, Die Ernährung, Hermann's Handbuch, page 279.

³ Voit. Senator.

⁴ Voit.

⁵ Lancet, 1883, vol. i.

⁶ Natur u. Behandl. d. Gicht.

Garrod's investigations were mainly directed to the question of the relation of the excretion of uric acid to the formation of calculi, but in the course of them he makes some interesting statements about the amount of uric acid excreted by birds, which seem to prove that in them this substance must be formed in the kidney itself; and if in them, he thinks, then in all probability in man also, contrary to his former view. The quantity of this excretion in certain birds is indeed enormous, the daily amount being sometimes more than the whole weight of the kidneys. Knowing the average amount which the blood contains, and calculating the number of times that the kidneys refill themselves with blood in the course of the day, Garrod confidently affirms that they could not in that way obtain a sixth part of the uric acid which they excrete. He claims also to have found that the reason that the urine of herbivorous animals contains no uric acid is because they form hippuric acid from their food, and affirms that the uric acid excreted by man is greatly diminished, or made to disappear, if benzoic acid, a congener of hippuric acid, is taken by the stomach, a suggestion important for the treatment both of calculus and gravel, and of true lithæmia. The more recent experiments of E. Alleyne Cook¹ indicate that benzoic acid does not really destroy uric acid, but only prevents its precipitation by acidulation.

The able investigations by Ebstein are largely experimental in character. He fully indorses the uric acid theory of Garrod, and makes it probable that the uric acid salts, even while still in solution, impair the nutrition of the tissues through which they pass, and if in concentrated solution, impair them (as proved to be possible by actual experiment) to such an extent that the life of the tissues is destroyed, and in dying develop an acid reaction which causes the precipitation in them of the urate of soda. To this irritating action of these salts in solution in the blood he thinks the various symptoms referable to affections of the mucous membranes, the nervous system, the walls of the blood-vessels, etc., are due, and in fact he fully gives in his adherence to the doctrine of lithæmia *in the gouty*. The uric acid he believes to be formed not in one alone but in many organs, among which are to be reckoned (in gout, though not under normal circumstances) the marrow of the bones, and the muscles. Ebstein regards gout, therefore, as a disorder of nutrition in consequence of which uric acid is formed abnormally in the bones and muscles. He considers it analogous to cystinuria, or to diabetes, but does not recognize the agency of any underlying neurosis which various writers, and especially Dr. Duckworth,² have assumed. He extends widely the rôle played by uric acid, about as widely, in fact, as any of the English writers, but would say that without uric acid no gout. At the same time he thinks that this excessive production of uric acid may remain through life without causing symptoms of any kind, if no exciting cause comes in to provoke them.

The arguments by which Dr. Duckworth,² who is able to array a number of the highest authorities on his side, endeavors to prove gout to be at bottom a *tropho-neurosis*, either primary and inherited or secondary and induced by blood-poisoning, are ingenious and forcible, but of such a nature that it would be impossible to reproduce them here at length. He

thinks that without invoking the periodic action of the nervous system it is impossible to explain the outbreaks of the attack, which come sometimes without apparent cause, usually early in the morning, and are apt to be preceded by a sense of euphoria such as is sometimes seen before attacks of epilepsy, migraine, and the like; further, that gout evidently stands in a close relationship of mutual dependence and interchangeability with other neuroses, such as epilepsy, hysteria, asthma, migraine, angina pectoris; that the exciting causes of the acute seizures are often such as depress nervous force, like strong mental and moral excitements, venereal excesses, or sudden shock, without, however, acting directly upon the affected joints; and, finally, that the ability of the nervous system to influence nutrition, as seen in the arthritic complications of certain forms of locomotor ataxia and other diseases, is becoming more and more fully recognized.

Let us now turn to a consideration of the doctrine of lithæmia or suppressed gout, taking as representatives of the positive side of the discussion two of its most earnest supporters in this country, Dr. DaCosta,³ of Philadelphia, and Dr. W. H. Draper, of New York.

Dr. Draper's views were expressed in one of the American Clinical Lectures in 1875, and more recently, and in a modified form, in a paper read before the New York Academy of Medicine in February, 1883.⁴

In the latter paper Dr. Draper refers to the difficulties in the way of the humoral or chemical theory of gout, and admits that it may be primarily a neurosis, and that the over-production of uric acid and its presence in the blood may be only an epi-phenomenon in the disease. His views of the subject of diet have also been modified, but he finds that, in general terms, gouty patients and their descendants have especial difficulty in the digestion of saccharine and farinaceous food. The symptoms described in the first paper as of a lithæmic origin include flatulent and acid dyspepsia, painful and frequent micturition, commonly associated with the presence of uric acid, urates, or oxalates in the urine, neuralgic symptoms of unusual type and without tender points, burning sensations in the palms and soles, numbness of the hands and fore-arms, pain in the region of the tendo-Achillis and the dorsum of the foot, hypochondriasis and hysteria, chronic bronchitis, asthma, conjunctivitis, gastro-intestinal catarrh, aphthous ulcerations in the mouth, obstinate eczematous and erythematous lesions of the skin, the latter sometimes showing themselves in sudden swelling of the eyelids, cheeks, lips, and tongue, together with many other symptoms.

Dr. DaCosta lays especial stress upon vertigo, severe acute periodical headaches of neuralgic type, neuralgia, sometimes bilateral, burning pains in the feet and hands, and also gastralgia, cramps in the legs, sleeplessness, irritability or great depression of spirits, and the like. Other writers have referred to tinnitus aurium (such as Dr. Lyman has described to-night), irritability of the bladder, painful menstruation, etc.

In seeking for the pathology of these symptoms, two questions naturally present themselves:—

(1.) What evidence is there of the existence of an excess of uric acid in the blood; a condition which is assumed without argument by DaCosta, and by Draper in the earlier though not in the later paper?

¹ Brain, 1881, and elsewhere.

² British Medical Journal, 1883.

³ American Journal of Medical Sciences, 1881.

⁴ New York Record, February 24th.

(2.) What other signs have we that would justify us in setting apart these cases as belonging in a group by themselves; or as standing in any definite relation to the gouty diathesis?

Of direct evidence by examinations of the blood none so far as I can learn has been furnished (though Garrod speaks of its great desirability), except that Draper found an excess of uric acid in a case of gonorrhoeal rheumatism which he believed to be of gouty origin. Ball (quoted by Charcot in *Diseases of the Liver*) found uric acid, to be sure, in the blood of a patient suffering from gravel, an observation to which we shall refer again, further on. The only indirect evidence that is offered of the presence of uric acid in the blood consists in the more or less persistent presence in the urine of free uric acid or its salts. This was noted in almost all of DaCosta's cases, and he dwells upon it at some length.

What is the real significance of this sign? Chemically, it certainly indicates nothing more than increased acidity or condensation of the urine, no matter from what cause, which facilitates a precipitation of the uric acid and urates. A real and persistent increase of the total amount of uric acid is very exceptional, and would usually indicate, according to Ralfe, some serious organic or constitutional disorder, such as organic disease of the liver or spleen, phthisis, or cancer. It is not even a regular accompaniment of true gout.

From the clinical stand-point the matter is not quite so simple. So good an observer as Garrod finds from analysis of his numerous cases that gravel and calculus are more prevalent among the descendants of the gouty than among those of the non-gouty, although the gouty patients themselves do not often pass calculi.

The same view is taken by most other writers.¹ The observation of Ball has already been quoted. Charcot (*Diseases of the Liver*) refers to the observations of Rayer as pointing in the same direction, but says that he has himself several times examined the blood and serum from blisters of patients habitually passing uric acid crystals or concretions, without finding a trace of uric acid. On the whole, in spite of the mysterious, but accepted, relationship between gout and gravel, it is impossible to read at all extensively the views of the best authorities without becoming convinced of two facts: first, that to draw any inference from the precipitation of uric acid and urates in the urine this must be proved to be really habitual and not to be accounted for by concentration of the urine due to ingestion of too little fluid, or to temporary indigestion; and second, that even when this is not the case the most that we can say is that we have evidence of a disorder of nutrition which is sometimes associated with lithæmia.

I have in my mind a large family of persons who are, or have been almost all, sufferers from functional nervous disorders, such as insomnia, visceral neuralgias, mental depression, irregularity of the heart, etc. One of them has had what was perhaps gout, though that disease is not known to have been inherited. One member passes uric acid at long intervals for some days at a time, but the one who is the most free from morbid symptoms, and usually in good health, passes urine which habitually deposits urates in considerable quantity.

To turn to the second question, Do the symptoms in the cases that have been called lithæmia present

anything really characteristic, we will not say of lithæmia, but of any classifiable condition, and especially of one related in any way to gout? There is some reason, no doubt, to think that this is the case.

The burning palms and soles, the anomalous and sometimes bilateral neuralgias, the gastralgia and marked tendency to catarrh of the mucous membranes, and other symptoms are frequently said to be met with both in cases of true gout, and on the other hand in cases of another class, the limits of which we are trying to define. This class is believed by excellent observers to be very largely recruited from the families of gouty patients. Two considerations are, however, especially to be borne in mind:—

(1.) That we are only just beginning to learn the range of symptoms due to functional disorders of the nervous system from causes arising within itself or from simple insufficiency of nourishment (so-called *neurasthenia*).

(2.) That it is by no means certain that even in true gout all the symptoms referred to are due to the uric acid in the blood, since many of them may occur, as is pointed out by Ralfe, under any circumstances, such as scurvy, where the relative acidity of the blood is increased in consequence of the quality of the food (withdrawal of alkaline bases, etc.), or in disorders of the digestion, some of these latter being at times dependent on syphilis or other constitutional diseases.²

To return to the first consideration, it is difficult to see why we should in the interests of lithæmia dispossess the doctrine of primary *neurasthenia* of its just claims. There seems no reason why a person should not acquire or inherit, perhaps from a gouty parent, a poorly-working nervous system, and this seems often to happen, since the symptoms referred to may be present without there being any sign in the history of the patient or the condition of the urine to suggest a gouty origin. And if the nervous system can suffer upon its own account, the burden of proof surely rests with those who would refer the results actually observed to the immediate influences of poisoned blood. Whether or not lithæmia is inherited from gouty parents, however, it appears certain that such persons are apt to exhibit themselves, and to transmit to their descendants, strongly-marked neuroses, both general and special.

Finally, how far is it possible to judge from the effects of treatment whether the blood is lithæmic or whether a given set of symptoms are related to true gout? First we must decide in what the appropriate treatment of true gout consists. Is there anything about it which can be called specific? Some years ago this question would, no doubt, have been answered in the affirmative, but the notions with regard to the treatment of gout have of late undergone a considerable change. It has long been known, and the point has been dwelt upon anew at some length by Garrod in his recent paper, that the excretion of uric acid is very little affected by an increase or diminution of albuminous food, and Garrod distinctly states that he believes patients to have suffered in their health from the scanty diet of former times. Dr. Draper, as well as most other writers, now believe that nitrogenous food may be taken pretty freely. It is the hydrocarbons of the food, the sugar and the starch, which are now considered the objectionable portions, but it is

¹ Vide *Nouveau Dict. de Med. et Chir.*, art. *Gravelle*, where this whole question is treated with much fairness.

² I am present trying to ascertain, by a special method, whether the relative acidity of the blood really undergoes much change in such diseases as *dyspepsia*, etc.

very interesting to see the different grounds on which this opinion is maintained. Thus Ralfe, believing that gout is a disease of too great acidity, and analogous to scurvy and rheumatism, thinks the sugar is converted in the intestinal canal to lactic acid, and eventually in the blood to carbonic acid, and that the alkalinity of the fluid is thereby reduced.

Dr. Draper finds that gouty patients as a rule cannot digest sugar or starch easily, and that as a clinical fact these substances do not agree with them, and should be interdicted. Ebstein thinks them objectionable solely because they increase the corpulence of the patients, and thereby indirectly predispose to gout in various ways; an idea which is upheld by some observations in a different field by Fraenkel,¹ namely, that corpulent persons are more likely to suffer from enlargement of the heart through interference with the abdominal circulation. Garrod believes himself to have discovered that it is not sugar in its natural state, but only in a partially fermented state, as in beer, wines, certain fruits, and the like, that is objectionable, perhaps from giving rise to some injurious ferment.

Again, apart from gouty tendencies, there are stomachs enough to which sugar and starch are not indifferent, and it is evident that more extended observations are needed before we can admit that the ability to digest and assimilate hydrocarbonaceous food is enough to distinguish between the possessor of the gouty taint and dyspeptics of other kinds. It is not to be forgotten that while milk diet (which is considered especially suitable for the so-called lithæmic patient) agrees as a rule very well with patients presenting marked nervous symptoms, yet some of them do better on a vegetable and farinaceous diet, without milk or meat. This does not, of course, interfere with the fact that the observations of Dr. Draper and others tending to show that there is a large class of nervous dyspeptics for whom sugar and starch are inadmissible are, if confirmed, of the highest practical importance, and all the more so if these cases can be shown to be generally of gouty origin.

The truth probably is, that the nutrition of patients of this class of so-called lithæmics (in reality perhaps not lithæmic at all) has to be carefully watched, and adjusted to the case in hand.

For my own part I am inclined to think, with Ralfe, that over-feeding, combined with freedom from excitement and care, is often for a time a better plan even than under-feeding with moderate exercise; while the combination of over-feeding and nervous excitement is, perhaps, an especially unfortunate one. Certainly among the multitudes of neurasthenic patients who have improved, temporarily or permanently, under Dr. Weir Mitchell's treatment of over-feeding with rest in bed, there must have been many of the so-called lithæmic class, if this class is anything as numerous as is believed.

Again, the action of saline laxatives and alkalies in gout cannot be regarded as specific. Ebstein discards them altogether, except as a means of correcting the dyspeptic symptoms; other writers regard them as a means of supplying a larger amount of fluid to the system. Voit and others believe that the presence of such salts in the blood increases the metamorphosis of tissue, and thereby the activity of nutrition, by increasing the osmotic circulation. Of course, when it is a question of actually retaining uric acid in solution in

the blood or urine their use may be justified on other grounds.

To conclude, I would express as my provisional opinion that the interests of medical progress would be best served if we avoided for the present the term lithæmia altogether, studying on the one hand, as if *de novo*, the causes which lead to a precipitation of urates in the urine; and observing, on the other, to see whether the nervous symptoms, the dyspepsia, etc., occurring in the descendants of gouty patients, are essentially different from the neurasthenias and dyspepsias in patients who cannot be suspected of the gouty taint. At the same time, whether their explanations are right or wrong, the extremely important service which such observers as Murchison, DaCosta, Draper, and others have done in showing that some close connection exists between disorders of general nutrition and a great variety of symptoms which had hitherto been studied too much in detail alone is worthy of the fullest recognition.

CASE OF DEATH FROM HEART CLOT FOLLOWING ETHERIZATION.²

BY FRANCIS MINOT, M. D.,

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THE patient was an unmarried lady, forty-five years old, of a nervous temperament, general good health, and rather stout. During the last year the monthly periods, previously regular, had gradually diminished in frequency and amount. The last one occurred early in October. During the past summer she had noticed some shortness of breath, together with an uncomfortable feeling of distention in the abdomen, for which she consulted me October 8d. She had a healthy look, no cough, no fever, the urine was normal, and in the absence of special symptoms no objection was made to her going to Lenox, where she intended to pass some weeks. In consequence of an increase in her discomfort, soon after her arrival in Lenox, she consulted Dr. J. F. A. Adams, of Pittsfield, who found evidence of an effusion in the right chest. She returned to Boston, and on October 15th I punctured the chest between the eighth and ninth ribs, below the angle of the scapula, but failed to get any fluid. The patient was extremely sensitive to pain, and refused to submit to a second puncture without being etherized. After a delay occasioned by the necessity of sending for the ether, she was put under its influence, the trocar was pushed through the next interspace above, and nearly two quarts of serum, strongly tinged with blood, were withdrawn. Nothing unusual in reference to the etherization occurred, and the patient was relieved by the operation. Strong tincture of iodine and blisters were applied to the back, and the iodide of potassium was given internally. The general condition was good, the temperature and pulse were normal, and the patient drove out daily in good weather. After a few days, dullness and faintness of the respiratory murmur were observed in the lower part of the right chest, but in the upper two thirds the condition was normal.

November 2d the patient went to Falmouth, where she spent twelve days, during the greater part of which she was out of doors taking long drives, walking a

² Read before the Boston Society for Medical Improvement, November 12, 1883.

¹ Zeitschrift der klin. Med., 4ter Band.

little, and sitting on the piazza, the weather being very mild. On her return to town she complained of the same symptoms as before, but especially of the feeling of distention of the abdomen, and imagined she might have a tumor there. Examination of the abdomen revealed nothing abnormal, unless a considerable amount of flatulence; there was no ascites, and no tumor could be felt. A digital rectal examination was made at the patient's request. The uterus was easily felt, apparently of normal size, and no tumor was detected in the pelvis. The temperature and pulse were normal. The urine, examined November 15th, contained a large amount of urates, but no albumen. Its gravity was 1015. The appetite was fair. There was a large amount of fluid in the right chest, and it was arranged that a second aspiration should be done on the next day, November 16th. On that morning the patient seemed to be in her usual health. She evidently dreaded the operation, but made no objection to it. As on the previous occasion she lay upon a sofa, inclined towards the left side, the shoulders being considerably raised by pillows. She was etherized without any special symptom; but after about half a pint of reddish fluid was withdrawn from the chest it was noticed that she became very livid, and that the breathing was irregular and gasping. She had vomited a little fluid once during the etherization, and it was thought that some of the contents of the stomach might have passed into the larynx. (She had taken no food except a little beef tea and some coffee since the preceding evening.) The canula was immediately withdrawn from the chest. The patient's jaws were separated. Cold water was dashed on the face, ammonia applied to the nostrils, etc., and in about fifteen minutes she began to breathe freely, though somewhat rapidly, and the livid color of the face nearly disappeared. Two hours afterwards she was sleeping quietly, and the color was nearly natural; but an hour and a half later the dyspnoea and lividity returned. The respiration became rapid, its rate being about 46, and the pulse 144 in the minute. There was a fine moist râle throughout the left chest. The heart-sounds were distinct, but faint. There was no valvular murmur. The face and hands became very dusky, and the patient was evidently in a state of asphyxia. She was conscious, was aware of her danger, and made some requests to her family in relation to the event of her death. A large sinapism was applied to the left chest. Brandy, ammonia, digitalis, and pilocarpine were injected subcutaneously, and champagne was given by the mouth, but she expired without struggle eight hours after the beginning of the etherization.

An autopsy was made November 17th by Professor Fitz, who has furnished the following report: Body warm. Face and neck, especially the latter, livid. Yellow, frothy fluid escaping from the mouth. Abdomen distended. Head not opened. Fat tissue throughout the body excessive, the subcutaneous fat of the abdominal wall being at least an inch and a half in thickness. Pericardium contained no excess of fluid. Both sides of heart, especially the right, distended with blood. On opening the right ventricle an elongated, cylindrical, grayish-yellow thrombus was found, nearly two inches in length, and as large round as the tip of the little finger. It extended from about two thirds of an inch below the origin of the pulmonary artery into the latter, and was loosely united to the valve. Its surface in general was smooth, though cor-

rugated at the uppermost part, and its consistency was firm except at the posterior portion, where it was soft, and the color a reddish gray. Soft, clotted, red blood was loosely attached to its surface, and a firmer dark-red clot, also attached, filled the ventricular cavity and distended the auricle. The thrombus was continued into the pulmonary arteries as far as their third bifurcation, at least, by small, thin, and soft dark-red clots. The left side of the heart contained liquid and freshly-clotted blood. The valves showed no abnormal appearance. The heart, as a whole, was small; the muscular substance of the right ventricle was excessively infiltrated with fat, which in many places wholly replaced muscle. For the most part the muscle fibres were free from evidence of degeneration, although they were occasionally found in a granular condition. The myocardium of the left ventricle presented no abnormal appearance. There was no increase of sub-endocardial fat, nor any marked increase of that beneath the pericardium. The right pleural cavity contained nearly two quarts of watery fluid stained with blood; the lung was moderately retracted, free from adhesions, and an incision showed nothing abnormal excepting a dryness of the upper, and a moderate oedema of the lower, lobe; as a whole it was anæmic, with an absence of air throughout the posterior and lower portions. The parietal, especially diaphragmatic, pleura, as well as that covering the lung, showed numerous small, gray nodules and plates of new formation, from which an opaque juice of creamy consistency escaped on pressure. The left pleural cavity contained a few ounces of fluid, and the pleural surface showed but a few of the nodules just described. The left lung was moderately injected and oedematous, with viscid yellow drops exuding from the cut bronchi.

The abdominal cavity contained several ounces of opaque pink fluid. The peritonæum, especially of the pelvis and of the right half of the diaphragm, bore nodules and patches similar to those found in the right pleural cavity; they were also found in the muscular portions of the right diaphragm. The omentum was transformed into a dense, gray, cylindrical mass, in intimate contact with the transverse colon. Spleen, kidneys, and liver showed nothing abnormal, with the exception of an unusual quantity of blood. Gall-bladder firmly contracted about several calculi imbedded in mucus; the mucous membrane appeared normal, the hepatic and common ducts free. Stomach distended with gas; its mucous membrane showed no abnormal appearance.

External examination of the intestine showed nothing abnormal. The pelvic organs were adherent to the wall. Bladder normal. Uterus large; its mucous membrane besmeared with a viscid, opaque, white fluid. An intramural fibro-myoma, as large as a small peach, projected from the fundus. Both ovaries converted into multilocular cystic tumors, nearly as large as a hen's egg; the walls of the cysts smooth; the contents thin and watery, or thick, yellow, and red. The altered ovaries, tubes, and broad ligaments firmly united together, and incrustated with tumors like those previously described. The structure of these tumors was everywhere the same, an alveolar stroma, containing small polymorphic cells of an epithelial type. There was no odor of ether about the body.

Summary. Cancerous peritonitis and pleurisy; fatty infiltration and fresh thrombosis of right ventricle; multilocular ovarian cysts; uterine fibroid; biliary calculi, with atrophied gall-bladder.

Death consequent on the inhalation of ether is so rare an event that every case should, if possible, be reported in detail, and be subjected to the closest scrutiny, in order that by comparing such cases together we may possibly be able to discover the cause of the fatal event, and perhaps be able to avert it in future. In the present instance it is evident that death was caused by asphyxia, and not, as in chloroform narcosis, by paralysis of the heart. The patient lived several hours after the first alarming symptoms; she was conscious, and was able to speak. There was no obstruction in the air passages. A thrombus had formed in the right ventricle of the heart, producing in the first instance embarrassment of the pulmonary circulation, and after its size was increased by gradual accretion of coagula, finally stopping it altogether. How can we account for the formation of the clot? The patient was apparently in fair health, but the extremely fatty condition of the walls of the right ventricle of the heart, in addition to the presence of a large effusion in the right pleural cavity, doubtless weakened the heart's action, which effect was further increased by the disturbing action of the anæsthetic on the respiration. This condition of things was perhaps aggravated by the inclination of the patient toward the left side, which allowed the weight of the fluid in the right pleura to press somewhat upon the heart and the left lung. How far the cancerous cachexia of the patient tended to favor coagulation of the blood I have no means of knowing. At all events the situation seemed exactly the same as at the time of the previous operation, when no untoward event occurred; nor did it differ essentially from that in many cases of etherization of daily occurrence. The thrombus was not the result of removal of fluid from the chest, as scarcely eight ounces had been withdrawn.

Some other points of interest in this case may be briefly alluded to: The discovery at the autopsy of cancerous disease in the thoracic and abdominal cavities was not wholly unexpected on account of the character of the fluid withdrawn from the chest. Dr. Bowditch long ago pointed out that the presence of bloody serum in that cavity is strongly diagnostic of cancer of the lung and pleura; but in the absence of any other evidence of cancer I hoped that the blood might in this case have been caused by wounding the lung with the trocar at the time of the first operation, although the color of the fluid was uniform, and there were no clots. Though I believe that Dr. Bowditch's rule has few exceptions, yet one such has occurred in my practice. In August, 1879, I removed from the chest of a gentleman of this city a quantity of fluid which resembled exactly that obtained in the present case. The patient recovered, and is now alive and well. On the other hand I have performed paracentesis of the left chest five times within the last few weeks in the case of a lady who has had both breasts removed for cancer; but though it seems highly probable that the effusion in this latter case is the effect of a cancerous invasion of the pleura or lung, the fluid withdrawn has each time been clear and perfectly free from blood. In the case now reported the aspect of the patient was that of a person in perfect health. So far from being emaciated, she was unusually plump; there was no pallor, and she complained of no pain, though there was a feeling of discomfort, or, as she expressed it, of "tightness," in the abdomen. The absence of symptoms of cancer may be explained by the fact that the

malignant disease had not yet invaded the structure of any vital organ.

That the patient had experienced no symptoms relating to the menstrual function is remarkable, considering that both ovaries were apparently destroyed by cystic disease; for the diminishing frequency of the periods must be regarded as normal at her age. The uterine fibroid was so situated as to be liable to give rise to no hæmorrhage; and it was not large enough to cause inconvenience by its bulk.

So far as we are justified in drawing conclusions from a single observation, we may learn from the above case: (1.) That etherization is not altogether safe for a patient with a large effusion in the chest, and should not be employed if it can be avoided. (2.) That when employed, unusual care should be taken to prevent accidents, and especially that the patient should be inclined towards the same side with the effusion. The case also confirms Dr. Bowditch's law, that the presence of blood in the fluid removed from the chest is a strong presumption in favor of cancer of the lung or pleura, or both.

ENTERIC PARAPLEGIA.¹

BY ROBERTS BARTHOLOW, M. D., LL. D.,

Professor of Materia Medica and General Therapeutics in the Jefferson Medical College, Philadelphia.

By the term enteric paraplegia I intend to express the conception of a spinal paralysis, produced by an intestinal disorder. It is a truly reflex paralysis. The fact of the existence of such a malady is denied by many, and indeed most of the reported examples will not bear careful inspection, for it will be found, as I shall show, that they are really cases of ascending neuritis. Eliminating such from the examples of true reflex paraplegia to be found recorded, I intend to place the latter in a special group composed of cases presenting the symptoms of an enteric disease, during the course of which a motor and sensory paraplegia manifests itself, and pursues a course obviously dependent on the original lesions. The cases I have lately seen occurred in men over sixty years of age, and each one presented a morbid complexus so distinctive and uniform as to entitle it to be regarded a substantive affection — a pathological entity. Although such cases have been described as examples of reflex paralysis, they have not been adequately differentiated from others similarly classified but of different nature.

Before attempting the task of analysis and differentiation, I must give a brief outline of three cases, the most recent which have come under my observation.

CASE I. Mr. R., aged sixty-four, merchant and banker, of very vigorous and robust frame, rather spare and bony in outline, but capable of great endurance, called on me a year ago, amongst other physicians of this city, for relief to an obstinate bowel affection. His story was this: for a year or more previously he had suffered with intestinal indigestion, colic pains, flatulence, and considerable depression of spirits. Soon after these symptoms were experienced he began to have pain in the back, with more or less band-like constriction of the abdomen, a feeling of numbness in the feet and legs, a strong sense of fatigue in the inferior extremities, followed by weakness and awkwardness of move-

¹ Proceedings of the College of Physicians of Philadelphia. Read November 7, 1883.

ments in walking, obstinate constipation, and slowness in the emission of urine. For the relief of these alarming symptoms he consulted an eminent practitioner of this city, who diagnosticated myelitis and advised cups, the moxa, and a pill which probably contained ergot. Without using any of the local applications, Mr. R. took the pills, which had a favorable effect in relieving the flatulence and constipation, but presently dysenteric attacks supervened, and then a remarkable change ensued in the spinal symptoms. Up to this period the paraplegia had steadily increased, and walking had become exceedingly difficult, but the change in the condition of the intestine effected a revolution in the state of the spinal functions, and in the course of a few weeks all the paralytic symptoms had disappeared. Still troubled with intestinal indigestion, Mr. R. finally consulted me amongst others, when I learned the details of the case just given. Very recently I have heard that Mr. R. continues free from the spinal symptoms, and has in the main got rid of his intestinal disorder.

CASE II. Mr. P., a tall, thin, but hardy Quaker farmer, aged seventy-two. I saw the patient at his home near Delta, York County, this State, in consultation with Dr. Hickman, a very intelligent practitioner living there. I learned that the patient some ten years before had experienced a similar attack, but had recovered rather suddenly under the influence of remedies which were then prescribed. For some years he remained comparatively free from disorders of digestion. The present attack came on during the past winter; at first there appeared a very considerable disturbance of digestion,—acidity, pyrosis, flatulence, and colic pains. The distress was increased by taking food, and apparently attained its maximum when the alimentary materials entered the intestines. In fact the symptoms of intestinal indigestion were the most pronounced throughout, and to these were added obstinate constipation, the stool consisting of balls united by masses of mucus or coated with the same. Very soon after the gastro-intestinal catarrh was established Mr. P. began to experience numbness of the feet and legs, and an increasing difficulty of locomotion.

At the time of my visit with Dr. Hickman the patient was nearly entirely disabled. The history of very severe and continuous digestive troubles was repeated. I will, therefore, to occupy as little time as possible, pass on to the objective examination of the paraplegia.

He could not stand without assistance; there was an extreme degree of ataxia; the muscles were so weak that his utmost efforts could not at all hinder slight movement of extension when the legs were flexed on the thigh; the tactile sense was so lowered that the points of the aesthesiometer could not be felt at all; the muscles responded feebly to an induction current; the emission of urine was very slow, and there was much dribbling afterward, and the bowels were extremely sluggish. There was a feeble knee-jerk.

With attention directed entirely to the digestive trouble, beginning with an exclusive milk diet, in two weeks a marked improvement was manifest in all the symptoms, the paraplegia disappearing. In a letter recently received from Dr. Hickman I learn that after a period of very great improvement Mr. P. began to decline in strength, owing to failure of the functions concerned in nutrition.

CASE III. Mr. McK., of Clearfield County, about

sixty years of age, has had for many years frequent attacks of sick headache. Within the past year pronounced symptoms of intestinal indigestion, pain of a colicky character, flatulence, and irregular action of the bowels, etc., have come on, but the symptom which has caused the greatest apprehension, and on account of which more especially he has called on me, is an increasing numbness, with some diminution of power, of the inferior extremities. The tactile, pain, and temperature senses are not abolished, only slightly impaired, and the tendon reflex is unaffected. A feeling of fatigue, of weight and heaviness, is felt in the legs, but locomotion is not as yet much affected. I await further developments in the symptoms referable to the nervous system, but meanwhile treatment is directed to the gastro-intestinal disorder.

Cases similar to those which I have thus briefly outlined have been recorded by various observers. An admirable example, and one of the first of its kind, was narrated by that eminent clinician, Graves, of Dublin.¹ In this case extreme gastric disturbance, with less important intestinal, came on in distinct paroxysms, varying in duration from several days to two or three weeks, and accompanied by complete motor paraplegia. For a time entire recovery took place, the paralysis disappearing with the cessation of the other symptoms. Finally the attacks grew so frequent as to be almost continuous, and death ensued from exhaustion. The minutest examination failed to disclose a lesion in any organ of the body. With the advance in our means of investigating morbid states such cases of presumed functional disease of the nervous system are becoming more and more rare. That there is a condition of reflex paraplegia, due to anæmia of the cord, is a postulate I expect to maintain. That there is, however, a so-called reflex paraplegia connected with diseases of the gastro-intestinal and genito-urinary tracts which is not truly reflex is another postulate that I believe to be susceptible of demonstration.

There was a period, in England more especially, when the notion of reflex paraplegia secondary to intestinal, renal, and genital disease, was widely entertained. The cases first reported by Stanley,² Brodie,³ Stokes,⁴ Graves, and others, were supplemented by the striking narratives of Gull.⁵ Then Brown-Séquard⁶ gave a scientific explanation of the mechanism, referring the paralysis to vaso-motor action. It must be admitted, nevertheless, that the doctrine of a reflex paralysis has not maintained the position it once had. In no modern work is the subject treated with the extent and gravity befitting an important disease.

The two postulates I purpose to sustain are:—

- (1.) That there is a reflex paraplegia due to a functional disturbance of the intestine, enteric paraplegia.
- (2.) That there is a paraplegia having its initial seat in the end organs of the nerves distributed to the mucous membrane, thence ascending to the cord by a progressive neuritis.

As respects the first postulate, the cases I have narrated, and many others on record, demonstrate a causal connection between the enteric disorder and the spinal. That the paraplegia is functional is proved by its

¹ Clinical Medicine, edition by Neligan, vol. i., p. 558.

² Medico-Chirurgical Transactions, vol. xviii., p. 260.

³ Lectures on Urinary Organs, page 115.

⁴ Practice of Medicine, Treatment of Nervous Diseases.

⁵ Guy's Hospital Reports, various papers.

⁶ Lectures on Paralysis, etc., 1861.

prompt cessation when the cause is removed. One of the means of determining whether a given paraplegia is due to a myelitis or to mere anæmia — that is, functional — is the subcutaneous injection of strychnine. At a late meeting of the American Neurological Association Dr. Jewell, of Chicago, recounted his experiences with considerable doses of strychnine in cases of paraplegia which improved so remarkably that they must have belonged to the merely functional group. It is in a high degree probable that cases of merely reflex paraplegia, — of enteric paraplegia, — especially as they occur in aged subjects, are relatively frequent, and happen from a degree of intestinal disturbance that seems a mere accident of the morbid complexus.

What is the mechanism? We are helped in our consideration of this question by physiological data. Kussmaul and Tenner (quoted by Erb) have shown that sufficient loss of blood will cause paraplegia. Tying the abdominal aorta, and its obstruction by disease, of which Gull¹ has given a striking example, embolic blocking of the spinal vessels, as Panum² has experimentally demonstrated, and large uterine hæmorrhage, as Moutard-Martin³ has shown, have alike stopped the spinal cord functioning. In other words, an insufficient blood supply — an anæmia — is a cause of paraplegia. Brown-Séquard, in his Lectures, published in 1861, maintained the thesis that a strong contraction of the vessels of the cord induced by reflex stimulation is the essential condition in reflex paraplegia. We should not lose sight in this connection of the degree of stimulation necessary. A moderate degree of intestinal irritation suffices, for the law of reflex contraction of the vaso-motor fibres may be formulated thus: irritation of the end organs of the sensory nerves, not too violent and long continued, stimulates the vaso-motor centre in the medulla, and causes a general contraction of the arterioles; but excessive and protracted irritation depresses the vaso-motor centre and relaxes the vessels. It seems probable that an ordinary intestinal indigestion, and the stretching of the nerve fibres produced by retained gas, is a degree of irritation sufficient to produce the supposed effect. To the further elucidation of the mechanism of enteric paraplegia it is necessary to recall the fact that the blood pressure in the vessels of the intra-abdominal organs rises and falls within considerable limits in quite an independent manner, controlled, doubtless, by the same ganglia that regulate the calibre of the intra-spinal blood-vessels.

The circulation within the spinal canal is peculiar, in that the veins bear such a disproportionate volume to the arteries, and that the whole vascular supply is in a certain sense a diverticulum. Atheroma of the vessels will contribute to the result of reflex irritation, and hence it is that paraplegia has resulted from endarteritis of the spinal vessels.

The second postulate is that the paraplegia, which succeeds to certain cases of enteric, renal, or genital disease, is due to an ascending neuritis. Chronic dysentery, pyelitis, and vesical catarrh are affections during the course of which the spinal cord has become diseased. Lesions of continuity involving the terminal nerves in structural changes are necessary to the production of this effect. The part which ascending neuritis may play in causing anatomical alterations of the spinal cord is exhaustively shown by Friedreich in

his monumental work on progressive muscular atrophy.⁴ Whether we accept his conclusions or deny them, we cannot withhold the full measure of admiration for his labors. Starting with the theory of an intramuscular neuritis, Friedreich holds that by an extension of this affection upwards the cord is ultimately reached, and the changes belonging to progressive muscular atrophy are wrought. The intramuscular neuritis admitted, the rest may easily follow. Under the term "Chronic Ascending Neuritis," Dumenil has described the changes in injured nerves which, caused by trauma, proceed from the point of injury up to and involve the cord. Vulpian has especially demonstrated the modifications produced in the spinal cord, by the section of a principal nerve in a member, usually the sciatic.⁵ The nerves of a limb amputated, as Dickinson has especially shown, undergo degenerative atrophy, and that part of the spinal cord in anatomical connection therewith also atrophies. Many other observations might be quoted, but these will suffice to show how changes in the cord follow injuries to peripheral nerves.

In paraplegia secondary to ulceration of the mucous membrane we can readily, I think, conceive of a lesion of the peripheral nerves and an ascending neuritis to which the succeeding changes are due. It follows that such cases require a very different prognosis from those of simple reflex paralysis. The course and termination of the latter are affected by the causal lesions, whilst the former pursue a steadily unfavorable direction from the beginning of the spinal symptoms. The differentiation of reflex from secondary paraplegia is made by attention to the following points: —

Reflex paraplegia is sudden in its onset, or, at least, develops quickly; secondary paraplegia is gradual in its evolution; the former is soon complete in all points of its symptomatology; the latter attacks one spinal function at a time. Reflex paraplegia follows the fortunes of the producing malady; secondary paraplegia pursues an independent course, and when the alterations begin in the spinal elements they proceed in their own way, just as after amputation of a limb the changes in the cord go on in the associated nerve fibres, or, as in Landry's ascending paralysis, the lesions proceed by contiguity of tissue. Reflex paraplegia, of and by itself, never proves fatal, nor does it inflict permanent damage; secondary paraplegia may be the cause of death, and, if not fatal, effects lasting mischief.

To this view of reflex paraplegia it may be objected that extreme variations in the vascular supply must ultimately lead to structural changes. This is certainly possible, but the spinal, like the cerebral, circulation is arranged to permit considerable variations in the amount of blood.

It remains to explain, if an explanation be possible, why intestinal or renal lesions may in one case produce a merely reflex disturbance, and in another, set up an ascending neuritis. There are, probably, two reasons: (1) the depth and extent of the peripheric lesions; (2) an inherent susceptibility to degenerative changes in the nervous elements. The first to me has profound significance, and I have already alluded to it. A degree of peripheric irritation not too great will merely stimulate the vaso-motor centres, and cause anæmia of the cord by tonic contraction of its vessels,

¹ Guy's Hospital Reports, 1858, page 311. |

² Virchow's Archiv, Band xxv.

³ L'Union Médicale, 1852.

⁴ Ueber progressive Muskelatrophie, über wahre und falsche Muskelhypertrophie, Berlin, 1873, Hirschwald.

⁵ Archives de Physiologie Normale et Pathologique, No. 3, 1868, page 443.

but when the lesions of the mucous membrane are of a destructive kind, depression of the trophic centres, as well as of the vaso-motor, ensues. That there is a neuropathic type of constitution, in which the nerve tissues are peculiarly prone to take on morbid changes, is an indisputable fact. When the two influences coincide the result is not doubtful.

I must, then, conclude, that there is a malady which may properly be entitled *Euteric Paraplegia*.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

NOVEMBER 14, 1883. Meeting called to order at eight o'clock by DR. GEORGE B. SHATTUCK, chairman.

MEDICAL TRAMPS.

DR. H. I. BOWDITCH requested the privilege of occupying a few moments for the purpose of warning the profession against a band of medical tramps which at present infests Boston and its suburbs and by every expedient seeks to obtain pecuniary aid from physicians. One of these impostors has suffered an amputation of the thigh, wears an artificial limb, professes to be a graduate of Harvard and the son of a physician, and presents plausible testimonials recommending him to the profession. The letters of commendation were found by Dr. Bowditch to be forgeries, and the man himself is a swindler. Another member of this band of conspirators is a young man who is elaborately dressed and makes a favorable appearance, and whose habit is to call at the physician's house when the doctor is away. He represents himself to be the son of a celebrated physician of New York who is a very intimate friend of the physician at whose door the young man is standing. He further states that he has been robbed of all his money and desires to borrow a sum, generally from three to five dollars, to aid him in reaching his home. Upon being informed that the doctor is not at home his eyes fill with tears and he appears to be in great distress of mind, and at length endeavors to borrow the sum required of the person who has come to the door. If he does not succeed in this ruse, he asks the time at which the doctor will return, and is very particular *not* to return at that time. Another is a man of swarthy complexion, who pretends to be from India, but is probably an arrant cheat.

The regular business of the evening was then taken up. The first matter was the election of a chairman for the ensuing year, the present incumbent, Dr. G. B. Shattuck, who has filled this office for two years, having positively declined a reelection. On motion of DR. R. M. HODGES, seconded by DR. A. L. MASON, the name of Dr. R. T. Edes was proposed, and he was unanimously elected. As Dr. Edes was not present, the Secretary was directed to acquaint him with the action of the Section.

DR. G. H. LYMAN then presented the first paper of the evening, entitled

TINNITUS AURIUM AND VERTIGO AS PROMINENT SYMPTOMS OF LITHÆMIA.¹

This was followed by a paper presented by DR. J. J. PUTNAM, entitled

RECENT VIEWS CONCERNING THE DIAGNOSIS AND TREATMENT OF LITHÆMIA.²

The CHAIRMAN alluded to the thoroughness with which the ground was covered by the two readers, and hoped that the discussion of the subject would be full and complete. The subject was then placed before the meeting.

DR. S. G. WEBBER said that he had been very deeply interested in both the papers, but wished that in addition to the opinions of so many distinguished authors Dr. Putnam had given us his own views upon lithæmia at greater length. From his review we must conclude that we really know very little upon the subject; even observers who have devoted much time to the study of the questions involved, have changed their views within the last few years, and now hold opinions quite different or the reverse of their former opinions.

Two symptoms have not been mentioned in these papers, which are not so frequent, perhaps, as the others, but are yet of interest, — irritability of temper, or a change of disposition; this may be only an accidental coincidence depending in part upon the annoyance and discomfort caused by the other symptoms, perhaps, however, it may be due to the deficient nutrition of the brain. These patients are often much more disturbed at certain times in the day than at others, are excitable, and sometimes violent. Another symptom is temporary deafness, which may last only a few hours.

The diagnosis between lithæmia and other nervous affections is by no means always easy. Two conditions or diseases may be thought to be present, namely tumor of the brain and epilepsy, when there is only lithæmia. A patient with headache, tinnitus, vertigo, change of disposition and languor, may be suspected of having a tumor; even a careful examination may not satisfactorily clear up the doubt, and it would be necessary to wait for time to show the truth by the development of other symptoms, or by the recovery of the patient.

Vertigo even without loss of consciousness raises a suspicion of epilepsy; when several attacks occur near each other, and then again after a long interval another series of attacks, the resemblance is quite close. As a rule, in lithæmia consciousness is not lost; in epilepsy consciousness is usually lost in some of the attacks, though exceptionally these partial attacks may precede by several months or years the fully developed *grand mal*. In lithæmic vertigo the bromides, which usually lessen the number and severity of the epileptic attacks, have little or no influence for good. Yet it is necessary to guard against an apparent benefit which would be deceptive; if the bromides were given at about the time of a natural remission in the symptoms the drug might seem to be of benefit. Time would show the error.

We probably need to pay more attention to the character of the urine in all doubtful cases.

DR. DAVID HUNT remarked that this discussion has suggested the relation of the science of medicine to the art of medicine; our history proves that attempts to

¹ See page 553 of this number of the JOURNAL.

² See page 556 of this number of the JOURNAL.

use pure hypotheses as foundations upon which to build methods of practice have obstructed the progress of the art of medicine; in the present instance we have no definite knowledge of the formation of urea and of the conditions in which it exists in the blood; such being the case, I am very skeptical as to the advantage of adopting the name "lithæmia" as descriptive of a morbid condition for which a special therapeutics is adopted.

If lithæmia is to be considered as a form of larvaceous gout we must also acknowledge that since Sydenham's day we have added nothing to his description of gout but the name "urea"; yet he has said nothing of tinnitus aurium as a symptom of this or of any other form of the disorder; it is suggestive to observe how little such a clinical artist as Trousseau has been able to add to Sydenham's description, and that he, too, has had nothing to say of tinnitus; as far as therapeutics are concerned it is noticeable also that the alkaline cathartics, so advantageously employed in lithæmia, are just the remedies which Trousseau has warned against as so dangerous in larvaceous gout.

If the blood-poisoning in this condition is to be accepted as the specific cause of the irritation of the auditory nerve, is it not surprising that we hear so little of tinnitus in Bright's disease, excepting in those cases where we get direct, local causes in the catarrhal affections which accompany it? We know that anæmia causes irritability of this and other nerves; we know that closure of the Eustachian tubes, spasm of the tensor tympani and stapedius muscles, and various disorders, by direct and by reflex action upon the rich nerve supply of the middle ear, cause this symptom; having founded our knowledge upon so much of fact, we hold that it is not good practice to introduce into this department of knowledge a hypothesis founded not only upon no certain knowledge, but also upon no well-known analogy. Aurists, in the vast majority of cases of persistent tinnitus, are able to demonstrate the cause in some local disease; other objective causes no doubt remain to be discovered, but a theory of "lithæmia" is in no way calculated to aid the search. Let us recall the time when every "blepharitis" was "scrofulous," or "gouty," or something else, and then think of the condition to-day, when, as every oculist knows, nine tenths of the cases of blepharitis are caused by the lack of proper glasses, and ask ourselves if these specious but baseless hypotheses have ever advanced the art of medicine. As long as they kept us from the path which Donders, Von Graefe, and Helmholtz have followed, they not only kept us from the best in art, but they constantly opposed the application of the methods of science; so in this matter a "lithæmic" tinnitus or vertigo, without adding anything to our practical success, will stand in the way of that careful objective study by which Hebra has made modern dermatology what it is, and to which modern science is continually directing the student of medicine.

DR. C. J. BLAKE thought that tinnitus, like pain, might be regarded as a physical conscience, too valuable as a symptom to be ignored or put aside with superficial investigation, and that in weighing it as a symptom, due regard should be had to the character of the tinnitus and its origin. Subjective noises in the ear may be for instance either of extrinsic or intrinsic origin: under the former head being included noises resulting from the movements of foreign bodies in the external canal, as of a hair impinging upon the membrana tympani, movement of fluid in the middle ear,

sounds resulting from contraction of the muscles, changes in tension of the membrana tympani, and in the condition of the Eustachian tube, and the like; while under the head of intrinsic causes may be classed, for the purpose of distinction, the various circulatory murmurs and other sounds, more distinctly musical as a rule, which indicate some irritation of the auditory nerve.

In regard to the cases described by Dr. Lyman the intrinsic cause of the tinnitus may be masked by the existence of a thickening of the mucous membrane of the middle ear, in itself sufficient apparently to account for the subjective sound, in this case a circulatory murmur, the same obstruction in the middle ear which prevents sound from passing inward preventing this sound from passing outward; for, as Dr. Draper says, in cases of gouty habit there is both an irritation and inflammation of the mucous membrane and a vessel dilatation; the former favors a progressive thickening of the mucous membrane of the middle ear, the latter, when it occurs in the ear, furnishes an increased circulatory murmur.

To treat the local trouble of the middle ear only, under such circumstances is of course a mistake; it is equally a mistake to leave the ear out of consideration altogether and to refer the aural symptom under consideration to general causes alone.

DR. R. H. FITZ said that he agreed entirely with the views presented by Dr. Putnam, which contain the opinions of the most recent writers upon lithæmia in its various forms and phases. It is still true, however, as Dr. Hunt has stated, that we as yet know but very little about the essential character of the disease, of which we are obliged to judge from a complex and often a contradictory array of symptoms. Most cases in actual practice are best treated by attention to the underlying dyspepsia. In that variety of this disease represented by neurasthenia the patients sometimes lose flesh and grow worse at the same time, though this is far from being the rule. In the dietary of lithæmia each individual patient must find out by experiment and experience what things he can take, and what he must avoid.

DR. C. F. FOLSOM stated that he had seen such cases, and that he had arrived at conclusions regarding them similar to those of Dr. Putnam. Dr. Folsom does not feel at all sure of the pathology of these cases, but treats them all on the same general principle. He mentioned a case occurring in a lady in which tinnitus had been the prominent symptom, and had subsided under tonic treatment. During some years no symptoms of lithæmia were observed, when, suddenly, last summer, an attack of gout supervened.

DR. G. L. WALTON remarked that in many instances there is no ascertainable objective cause for subjective sensations of hearing. The amount of distress occasioned by the noise in the ear varies greatly according to the momentary state of mind which the patient may for the time be in, so that a uniform degree of irritation will awaken a very variable and uncertain amount of reaction or response, sometimes to a degree in no way corresponding to the intensity of the cause, and frequently to a degree far in excess of the normal reaction to the cause. We see this illustrated in the ordinary events of daily practice, as when, for example, one patient cannot obtain sleep if a clock be ticking in the room, while another patient may find the silence of the night oppressive from it.

unbroken stillness, and may absolutely require the aid and companionship of a noisy mechanical device of wheels and bell, weight and pendulum, in order to procure quiet and refreshing slumber. The symptoms at different times are variable while the cause may be the same; there is a change in the amount of reaction from a uniform degree of stimulation. It is very probable that the functions of the nerve centres become disordered from anæmia due to malnutrition.

DR. HUNT thought that not half the cases of tinnitus could be explained on the hypothesis of a functional disorder of the nerve centres from excess of uric acid in the blood. All subjective noises are produced by an irritation of some or of all the fibres of the auditory nerve in some part of its course. It is not necessary to seize upon the idea of a lithæmic excess to account for this symptom, as we may be thus diverted from the real object of our study, which may be of an entirely different character.

DR. LYMAN agreed with the main portion of the discussion, and freely admitted that a large proportion of the cases of tinnitus may be accounted for by tangible and ascertainable disease, but a considerable number are not due to such causation. The question is, "What causes the tinnitus in these cases?" It may be due to the blood. It is known that a suitable nutrition, and the vaso-motor system both have much to do with subjective symptoms of all kinds. Under these conditions the heart may be deranged. This symptom is present in a group of cases which represents a large class of patients with subjective auditory symptoms, and particularly tinnitus. The treatment advocated in the paper read before this meeting relieves these symptoms, and we naturally deduce the theory of blood change. Many opposing hypotheses have been brought forward in relation to these well-known symptoms, and we might well become bewildered and skeptical of any knowledge upon the subject. In the cases here presented the subjective phenomena were marked, and in all quickly yielded to the same treatment, and the treatment may be claimed as a truly curative one in tinnitus and vertigo.

DR. G. B. SHATTUCK said that he had intended calling attention to the result of the treatment as supporting the diagnosis in the cases reported. Many cases, however, are observed in which tinnitus and vertigo occur, one or both, and which may undoubtedly be regarded simply as cases of malnutrition. When we attempt to group all these cases under the head of lithæmia we should not allow the name to deceive us as to the extent of our knowledge in regard to them.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

NOVEMBER 26, 1883. DR. CHARLES D. HOMANS presided.

DR. JOHN HOMANS reported a case of

MYXO-SARCOMA OF THE LEFT KIDNEY. REMOVAL, of which the following is an abstract:—

The patient was a fisherman, twenty-nine years old. He had, without known cause, been losing weight for about two years. The first thing noticed had been pain in the small of the back. This afterward ex-

tended to between the shoulders, and was followed in six months by bloody urine, which last recurred at irregular intervals. There was a hard flat tumor moving with respiration and extending from the left iliac fossa to the splenic region beneath the ribs and across the abdomen nearly to the umbilicus. The urine, examined by Dr. Cutler, showed no increase in white blood corpuscles, and no albumen, other than was accounted for by the blood. The urethra had been plugged by clot, making the use of the catheter necessary. The absence of calculus in the bladder was shown by sounding. The bowels were regular. The man was unable to work, because of the increased pain caused by it, and was anxious for an operation, and willing to run the risk. Of the consultants who saw the case, all but one believed it to be a tumor of the kidney. He thought it was one of the spleen. On November 24th the tumor, which was shown to the Society and which weighed four pounds, was removed under carbolic spray, an incision being made along the left linea semilunaris from the cartilage of the ninth rib to a point in front of the anterior superior spinous process of the ileum, and the opening enlarged by cutting backward toward the loin four inches. The descending colon, which was spread to twice its width, was slightly wounded in the operation and sewn up with the continuous suture. Another incision through the peritonæum exposed the tumor, which extended up under the diaphragm, encroaching on the thorax. Not being adherent, it was peeled out, both its ends were raised, and the renal vessels and ureter were first clamped, and then tied with silk. The room of the tumor was plugged with sponges while the abdomen was examined for clot, and then an incision was made through the quadratus lumborum to admit a drainage tube. After the operation a half drachm of laudanum and a half ounce of brandy were given in an enema. On the evening of the operation the pulse was 118, the temperature 102.2° F., and the respiration 35.

There seems no reason why the patient should not have lived, had the other kidney done its work. The urine varied from chocolate to deep turbid red, and was diminished. In the last twenty-four hours there were less than four ounces, the quantity having been five and a half ounces in the previous twenty-four hours. The patient died at two o'clock to-day, the temperature having been 100° F., pulse 120, respiration 32.

In answer to a question by Dr. Lyman as to cerebral symptoms, Dr. Homans said that the patient was calm or perhaps stupefied and slept much, but that there was no convulsion and no headache.

The question of carbolic poisoning having been raised, Dr. Fitz inquired as to the urine. Dr. Homans said that it was not green, and that that which he saw after the operation did not contain blood. To a question of Dr. Bradford he stated that the temperature did not go above 100.3° F., nor below 99° F.

DR. E. H. BRADFORD stated that in that case death was probably not caused by carbolic poisoning, as in the fatal cases there has been a low temperature with vomiting and diarrhœa.

DR. BRADFORD showed a

CALCULUS FROM A CHILD TEN YEARS OLD, which had evidently existed since babyhood. There was no history of blood or pain. He occasionally pulled on the penis, and at times held his water for twenty-four hours.

DR. FRANCIS MINOT reported a

CASE OF DEATH FROM HEART CLOT FOLLOWING
ETHERIZATION. THORACENTESIS.

DR. R. H. FITZ called attention to the importance of the alteration of the heart in explanation of the sudden death. In obese persons an increase of subpericardial fat tissue is to be expected, and is often so extreme as to interlard the muscular wall of the heart. Such individuals are frequently known to suffer from dyspnoea or asthmatic attacks, palpitation, and even angina pectoris. A feeble pulse and apex-beat with faint heart-sounds on auscultation suggest the existence of a "fatty heart." This condition, although possessing much of the clinical significance of a fatty degeneration of the muscular fibre of the heart, is to be distinguished from the latter. An atrophy of the muscle exists in the extreme cases, as in that reported by Dr. Minot, although anatomical evidence of incompetency, manifested by dilatation of the ventricle, was lacking.

The administration of ether, like any other depressing influence, for instance paracentesis without an anæsthetic, presumably enfeebled the action of a heart abnormally weak from the general cancerous disease as well as from the atrophy of its wall, and thus acted as an exciting cause in the formation of the thrombus. The growth of the latter progressed with great rapidity during the interval between the operation and the time of death. Flowing blood was necessary for its formation, and its origin was regarded as in the heart rather than in the pulmonary vessels from its adherence to the valve of the pulmonary artery, and the difference in color and consistency of the clot in the artery and the thrombus in the ventricle.

The limitation of the fatty infiltration of the heart to the wall of the right ventricle suggests the importance of an inquiry into the general symptoms of cardiac weakness, as well as the examination of the pulse and the auscultation of the heart, where doubt arises as to the propriety of administering an anæsthetic. In the present case the pulse indicated no enfeebled heart, nor was it likely, from the absence of evidence of alteration of the left ventricle, that the force of the apex-beat would have been lessened. Neither was there dilatation of the heart. Even the dyspnoea which may have been in part of cardiac origin was readily explained when evidence was found of accumulated fluid in the pleural cavity. The case not only suggests the importance of the comprehensive examination in doubtful cases, but also makes clear the difficulty, perhaps impossibility, of arriving at an absolutely correct diagnosis as to the actual condition of the wall of the heart.

DR. H. I. BOWDITCH remarked that he was confirmed in his previous judgment. Although he has allowed ether to be used in making a permanent opening, yet he has never done so for a simple aspiration. One lung being of no service, we should guard the use of the other.

Drawing blood at a first operation as a rule means cancer. In nine or ten cases in which he has got blood but one was benign. At a later operation it is a less important sign, being possibly a result of the first interference.

DR. C. B. PORTER could call to mind two cases of accident in the operation for a permanent opening. The cause was not recognized at the time. In one a

bronchus was wounded and the patient was drowned in his own pus, which invaded the opposite lung by this route, he lying on the sound side. In the other, respiration became embarrassed during etherization, a large trocar was thrust into the pleura, quickly finishing the operation, and the patient recovered.

DR. BOWDITCH said that if the patient *can* sit up he should do so, as if he lies at all it must be on the healthy side — increasing the risk.

DR. PORTER prefers to tap without ether when possible, and, except while going through the skin, believes there is little pain attending this course.

DR. MINOT stated that his patient of to-night's report always sat up until the last operation, when she lay on the diseased side and was tapped from below. There was no cough.

DR. F. I. KNIGHT said that in Dr. Minot's case the result might have happened without ether, and without operation. He himself, in a paper before this Society, had given abundant evidence that patients died in acute pleurisy from a variety of causes, which causes seem sometimes to be facilitated by the operation. He mentioned embolus of the pulmonary artery, syncope, both with and without operation, and one case of death from the rupture of a small vessel outside the chest. He repeated that Dr. Minot's patient might have died in the same way without operation. He would agree that care is needed in thoracentesis, but such a case would not keep him from the use of ether.

DR. LANGMAID, in answer to a question, said that, even making due allowance for the less care we take in etherizing dogs, it is a fact that they do die suddenly having been apparently in good condition the moment before.

DR. BOLLES said that death from ether is a rare thing. He reported the case of a child with inflammation of the middle ear and well-marked symptoms of meningitis. He etherized and cut into the mastoid process without finding pus. There was nothing unusual in the etherization, but as consciousness returned the mouth filled apparently with saliva, which flowed in streams, obstructing the respiration. He turned the patient on the face so that a cupful ran out, the chest being filled with mucous râles. The child died in a half hour. A free secretion of saliva or mucus is at times observed in etherization.

DR. WHITTIER said: I had hoped to strengthen the position which I shall take by the opinion of Dr. Bowditch. But I am unable to quote him in answer to this question: At what period in the heart's action is there the largest opportunity for the formation of a heart clot and the consequent pulmonary emboli? Is it during systole or during diastole?

I claim that neither the radial pulse nor stethoscopic examination of cardiac area declare with sufficient distinctness the abnormal condition wherein the diastole is so prolonged as to be a period more of danger than of rest, and that the pulse tracing is the only reliable indication and guide.

It is accepted on a standard that the time occupied in the complete cardiac movement is divisible into thirds, of which the normal systole takes one third and diastole the remaining two thirds. If these units of division be represented by spaced intervals, it will be clearly shown, that in proportion as the elements of the tracing normally found in the diastolic interval invade the interval belonging to systole, exactly and according to the degree of invasion is the evidence

and the measure of the prolongation of diastole and the larger opportunity afforded for cardiac thrombosis and consequent pulmonary emboli. The pulse tracing alone is a sufficient guide.

DR. BOWDITCH reported a case of

ARRESTED PHTHISIS.

The patient lived to fifty-one, and had chronic pleurisy for two thirds of his life. Every few years crackling appeared under the clavicles. Although a microscope maker, he got as much walking as possible. There was no tubercle, but a general amyloid degeneration. The speaker would never give up a man who had the pluck to keep out of doors. Crepitation may last for twenty years.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

AN adjourned annual meeting, followed by a stated meeting of the Society, was held November 26th. The first business was the report of the Committee on Hygiene, DR. S. OAKLEY VANDERPOEL, chairman, which was read by the SECRETARY, and which consisted of four parts. The first of these, on

MORTALITY TABLES AND EPIDEMIC INFLUENCES,

was prepared by DR. E. G. JANEWAY. From this it appeared that the mortality for the nine months of the year ending September 30th has been less than for the corresponding periods of the years 1881 and 1882, but somewhat greater, both absolutely and comparatively as regards increased population, than that of the same period in the years 1878, 1879, and 1880. There were 3604 deaths in 1882, and 2951 in 1881 in excess of 1883 for the three quarters comprised in the report, the cause for this difference being mainly attributable to the greater prevalence and fatality of the contagious diseases in those years. Then followed a table showing the differences in the zymotic diseases during the three years 1881, 1882, and 1883.

A comparison of the mortality from the various diseases during the first nine months of the past twelve years was then made. The deaths from small-pox were as follows:—

1872.....	853	1878.....	2
1873.....	107	1879.....	24
1874.....	222	1880.....	6
1875.....	1098	1881.....	364
1876.....	308	1882.....	258
1877.....	14	1883.....	12

In this connection a table was subjoined to show a comparison between the former and the present prevalence of small-pox, beginning with 1848. The work of systematic vaccination was commenced in 1875, and had continued up to the present time. Since that time the corps of the Board of Health charged with this work had performed 119,856 primary and 430,783 revaccinations, a total of 550,639. The work was initiated when a severe epidemic of small-pox was in progress, and on the two occasions where it had since developed, the Board of Health had been able to hold the disease successfully in check. There had been 780 deaths from it since the end of the epidemic in 1877, a period of six years, a number of them occurring among recently arrived emigrants. Without taking into account the fact that the city had trebled its population

in the time comprised in the table, the mortality from small-pox was only from one half to one fourth of what it was in any preceding six years, except between 1866 and 1871. Had the same mortality prevailed as in the years following 1848, instead of 780 deaths in these six years terminating with 1883 there would have been 7500 deaths. In other words 6500 people had been prevented from dying of small-pox. It was the duty of physicians to urge on the work of vaccination, particularly at present, since when small-pox had only prevailed to the limited extent of the six years just ending people became careless, and persuasive vaccination by public authority was more difficult to carry out. It was far more essential to keep up thorough vaccination now than to wait for the initiation of another outbreak of the disease, which would find its victims in the careless and obstinate.

The mortality during the first nine months of the past twelve years was then given from measles, scarlet fever, diphtheria, croup, whooping cough, typhoid fever, typhus fever, cerebro-spinal meningitis, malarial fevers, pneumonia, bronchitis, phthisis, and diarrhoeal diseases. "The tables show at a glance," continued the report, "the fluctuating character of the mortality from measles, scarlet fever, and diphtheria; from which it seems probable that, owing to the moderate number of deaths from scarlet fever this year, we should witness next year a marked increase in this disease; whereas for measles the probability would be that there would be a considerable diminution." Diphtheria was stated to be on the decline, and from the previous course of the disease it was probable that this diminished mortality might continue for a year or more longer. Pneumonia had produced forty-one less deaths than last year, but 235 more than in 1881, and 634 more than in 1880. The mortality from bronchitis was less than in either 1881 or 1882. Phthisis, on the other hand, had caused thirty-five more deaths in 1882 than in 1881, and fifty-nine more in 1883 than in 1882.

In referring to the diminished mortality from diarrhoeal diseases, Dr. Janeway spoke as follows: "No one is more aware than the writer of the fallacies liable to occur in comparing vital statistics; yet he feels that, making all due allowance for possible error, a considerable number of lives have been saved as the result of the employment of the summer corps of the Board of Health and of the active charity of New York City. These measures are sufficiently familiar to need no more extended mention."

After noting the fact that typhoid fever had made no very marked change in the past three years, the report was concluded as follows: The outbreak of typhus fever which began in 1881 seems terminated, as only ten deaths have occurred from this cause (during the present year). He who looks at the number of deaths which took place from this disease when it gained an entrance in New York in past years will again see the value of an actively interfering agency to prevent the spread of disease. But for the efforts of the Board of Health the disease would have spread greatly and extended over a number of years. Instead of a mortality of 225 in the outbreak of 1881-1883 there might have been a proportional increase, according to population, over what occurred in 1848 and the following years, when more than 4500 persons died of the disease; the equivalent of what would be over 10,000 for the present time. Judging from the annals of the past, a battle in which 10,000 persons were slain

would ever be commemorated in history. A battle in which perhaps more than that number of lives were saved from destruction by pestilence is a matter not deemed of any special moment. The moral of this is, that the medical profession of New York should see that its Board of Health is properly maintained, aided, and encouraged in its work. At times in the past physicians have from neglect or for concealment failed to notify the Board of Health of the existence of contagious diseases, with the effect of producing an epidemic in some instances.

The second part of the report of the Committee on Hygiene was by DR. O. D. POMEROY, and was entitled *Some Points on the Hygiene of the Ear*. It pointed out various ways in which ear trouble was apt to be engendered. The third part was on

SEWER GASES,

and was written by DR. STEPHEN SMITH. He strongly condemned the method of ventilating sewers adopted by the department of public works in New York, by means of perforated man-hole covers, which served only to fill the dwellings and streets with noxious vapors most prejudicial to public health. The specific gravity of the sewer gas was slightly greater than that of the ordinary atmosphere, and so, on escaping, it was held in the breathing stratum. What was needed, he thought, was an aspirating apparatus, and he recommended the adoption of metallic tubes connected with the sewers and carried to such a distance above the house-tops as to insure the diffusion of the gases in the upper air, where they could do no harm. If this were done, a current of pure air would be created down through the man-holes into the sewers, driving out all the sewage emanations through the escape pipes, and if these were placed even at intervals of one hundred feet he had no doubt the vaults would be thoroughly ventilated; while if they were placed at shorter intervals, the ventilation would be simply perfect.

The fourth part of the report was by DR. VANDERPOEL, the chairman of the committee, and was on the subject of

DANGERS TO THE PUBLIC HEALTH FROM THE ERECTION OF HIGH APARTMENT HOUSES.

The sanitary objections to these enormously high buildings affected both the inmates of them and the occupants of adjoining property. Among those affecting the inmates were the impossibility of complete isolation in case of the outbreak of contagious disease, the cutting off of the first three floors from sunlight, and the danger of miasm being conducted to the upper floors by means of the air-shafts employed for ventilation. Among the dangers to the occupants of neighboring property were the rendering of the streets damp and unhealthy by excluding the sun from them and the establishment of new currents of air, which were liable to cause smoky chimneys and interfere with the sewer ventilation of houses of the ordinary height.

The resignations of Dr. Austin Flint, Jr., and several other adherents of the National Code having been read and accepted, the

ADDRESS OF THE RETIRING PRESIDENT,

DR. DAVID WEBSTER, was delivered. In it he spoke of the marked prosperity of the Society during the year, and of the excellent work which had been

done in the prosecution of illegal practitioners of medicine.

The adjourned annual meeting then adjourned, and a stated meeting of the Society immediately followed, with the new president, DR. S. OAKLEY VANDERPOEL, in the chair. When the minutes had been read and approved, the

ADDRESS OF THE PRESIDENT ELECT

was listened to by the Society. In the course of it Dr. Vanderpoel suggested that the rich stores of material in the hospitals of New York, which were practically denied to the great mass of the profession, might be made available under the auspices of this Society for the study of relative methods of treatment, the influence of diathesis, the affiliation of various complaints and other interesting topics, and he strongly recommended the collective investigation of disease, a method which had of late been pursued with excellent results in England under the aid and encouragement of the British Medical Association. The self study of disease, he also thought, would be of great service in increasing our knowledge of certain disorders like dyspepsia, for instance, which caused a frightful amount of misery but killed no one. On motion, the suggestions of the inaugural address were afterward referred to the Comitia Minora for such action in regard to them as might be deemed advisable. At the conclusion of the address Dr. Vanderpoel announced the members of the committees on Hygiene, Ethics, and Prize Essays for the ensuing year, and appointed Dr. W. Gill Wylie to read a memoir of the late Dr. J. Marion Sims at the January meeting.

The report of the Comitia Minora, which recommended the election of fifteen new members, was then read, and the recommendation adopted, after which the paper of the evening, on

CEREBRAL EXHAUSTION,

was read by DR. J. LEONARD CORNING. While he believed the affection was a functional one, he was convinced that certain changes, of which the present state of our knowledge did not permit us to take note, occurred in the protoplasm of the brain-cells. Among the earliest symptoms to appear were great restlessness during the day and sleeplessness at night. There were apt to be severe pains in the vertex or superciliary region, and sometimes the pain was confined to the occiput, when the galvanic current was usually of great service. The head pains were followed by other symptoms, such as disorders of the memory and impairment of will power. Morbid irritability ensued, and frequent outbursts of uncontrollable anger were often noted. Disorders of the vaso-motor system were very frequent, and cerebral hyperæmia was apt to alternate with cerebral anæmia. Unevenness in the dilatation of the pupils was sometimes seen; and in some cases there was twitching of the abductor pollicis and other muscles. Other symptoms were morbid dread of society and morbid fear of all kinds, and hallucinations might sometimes occur. Among the predisposing causes were mentioned the nervous temperament and close application in some special and limited direction, and among the exciting causes, sexual excesses, disorders of menstruation, and mental worry of various kinds.

The essential pathological condition was believed to be an insufficiency in the nutrition of the brain-cells, and in the treatment the most important factor was

rest, which served to check the nervous drain going on and to replenish the exhausted vitality. A gradually increased amount of sleep was, therefore, to be secured, and in order to attain this end it was usually necessary to give the bromides temporarily. They were to be used in full doses during the day-time, so as to induce sleep at night. It was advised that the patient should be kept in a darkened room for from ten to fifteen hours out of the twenty-four, and that whenever he awoke he should be given a moderate amount of nourishing food in liquid form. Stimulus in the form of brandy or claret was allowed, and tonics, such as coca, iron, and phosphorus, prescribed. Phosphorus was believed to be of special service. Whatever tonics were given, however, systematic feeding was of the utmost importance. During his waking hours the patient was to seek recreation, all mental labor being strictly forbidden. In order to secure a good result great perseverance and the most careful regulation of the habits of the patient were required.

DR. PUTZEL said that his experience did not permit him to agree with the writer of the paper on several points. As to the circulatory disturbances alleged to exist in cerebral exhaustion the fact was often advanced, but no proof was ever offered. In the dead-house these disturbances were not seen unless there was some local disease present. One of the best proofs of his assertion was found in the fact that both cerebral hyperæmia and anæmia were sometimes said by equally good authorities to exist in the same patient. Thus, in one case which had come under his care ten or twelve physicians in New York had said there was cerebral hyperæmia, and a German specialist had said there was cerebral anæmia, while still another, of equally high standing, had pronounced that neither condition was present. Furthermore, ophthalmologists had become convinced that hyperæmia or anæmia of the retina afforded no evidence of the same condition existing in the brain. As to the treatment, he believed that the bromides did more harm than good. At first their use was often followed by an amelioration of the symptoms, but afterwards the good effect was lost, and they became positively injurious.

Cerebral exhaustion seemed to him to be due to three causes: The first was heredity, and while some patients inheriting a tendency to brain trouble were affected with organic disease, others suffered simply from cerebral exhaustion. The second was worry, and he doubted whether he had ever seen a case produced by over-work alone, without the element of worry. The third cause was general anæmia, and in cases due to this the ordinary ferruginous tonics would generally suffice for a cure. In the hereditary cases he thought it practically impossible to effect a permanent cure, as the trouble was liable to come back at almost any time. His general plan of treatment was a tonic and stimulant one, and he did not believe that absolute rest was beneficial. The tonic which he preferred was arsenic, and he considered this much better than phosphorus, which in his hands had never yielded any good results.

Both Drs. WEBSTER and ROOSA stated that the appearances revealed by the ophthalmoscope in cerebral exhaustion were as yet of no practical value, and DR. JACOBI remarked that this affection was not very clearly understood, simply because the brain was not as yet well understood. This organ could not be studied as a specialty, since it was dependent on every other or-

gan, and the observations of the general practitioner were needed to throw light on such a subject. In cerebral exhaustion the brain was used up by over-work, worry, etc., and as the circulation of the brain was in direct connection with the heart and muscles, it was necessary to take into consideration the whole system in studying the affection. If the brain was exhausted the whole system was apt to be affected. So far as we knew at present, it was a functional disease, although some affections which were formerly supposed to be of this character were now known to be organic in character. This was the case with infantile paralysis, which had been found to be in reality a myelitis affecting the anterior horns. As to the relations of the brain and heart, while at first the brain exhausted the heart, afterwards the heart acted in the same manner upon the brain. It was advisable in almost all cases of cerebral exhaustion, therefore, to keep the heart in as good condition as possible, and for this purpose there was no agent so useful as digitalis. Althaus, of London, had claimed wonderful things for the galvanic current in this affection, and he also had found it of service. He agreed, too, with Dr. Putzel, in regard to the efficacy of arsenic, which he was in the habit of administering for a considerable length of time in quite small doses.

Drs. A. H. SMITH, HARWOOD, and GARRISH also spoke, and the discussion was closed by DR. CORNING, who thought that heart trouble, when a complication, was dependent on the condition of the brain, since when the latter was remedied the heart got well of itself.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDÉ, M. D., RECORDER.

THURSDAY evening, November 22, 1883. The President, DR. TYSON, in the chair.

LARGE INTESTINES FROM TWO CASES OF CHRONIC DYSENTERY, ONE OF THEM SHOWING PSEUDO-POLYPI.

By J. H. MUSSER, M. D.

CASE I. The patient had chronic dysentery; further clinical information cannot be given. No record of autopsy preserved. The specimen is from the museum of the Presbyterian Hospital, and I present it to-night on account of its rarity. It is a part of the large intestine, fourteen inches long. To the naked eye it shows thickening of the mucous and submucous layers, and hypertrophy of the muscular layer. On the surface of the mucous coat innumerable polypoid growths are observed, some pedunculated, some sessile. The sessile growths are from the size of a millet seed to that of a chestnut, round or ovoid. The others also vary in size from a pea to a large bean; their pedicle is generally from one sixteenth to one eighth of an inch long. The reporter remembers seeing the specimen when recently removed, and knows there were more pseudo-polypi than are here visible, many having fallen off from handling, etc.; that there was scarcely any healthy mucous membrane; that in this part of the intestine there was almost complete ulceration of the mucous coat. At one point a large stellate cicatrix, depressed in the centre, is noticeable, while all over the surface cicatricial lines are observed, most distinct about the bases of the growths.

Remarks. In connection with this specimen I would

like to call the attention of the members to a minute description of a similar specimen by Dr. Woodward. His article may be found in the *American Journal of Medical Sciences* for January, 1881, and is entitled *Pseudo-Polypi of the Colon; an Anomalous Result of Follicular Ulceration*. According to the writer the origin and development of these polypi is as follows: (1.) A granulating ulcerated surface of the intestine. (2.) Numerous islets of mucous membrane on this surface. (3.) "The formation of cicatricial contractions commenced in the infiltrated submucosa constricting the margins of the islets of mucous membrane which were further transformed by hyperplastic inflammatory processes until ultimately they acquired the form of pedunculated excrescences, and projected into the lumen of the intestine like so many little polypi," being pushed out by the contraction of the connective tissue. Although the surface of the mucous membrane appeared to the naked eye healthy, with the microscope it showed it was submucous connective tissue infiltrated with lymphoid elements. A pseudo-polypus was composed of a central portion of connective tissue and a peripheral portion of diseased mucous membrane, the former continuous with the submucous layer, the latter limited to the surface of the growth. The histological changes in the mucous and submucous layers resembled those of chronic inflammation. The remainder of the bowel showed follicular ulceration.

CASE II. A second specimen was shown where the clinical history had been of chronic dysentery with acute exacerbation. Here the mesenteric and lumbar lymphatic glands were not enlarged. The cæcum was surrounded by old lymph, the appendix bound down by adhesions and thickened. The cæcum was dilated; the transverse and descending colon contracted; the walls of the entire colon were thickened. On opening the large intestine it was found to be extensively ulcerated. The mucous membrane and the ulcers were strikingly anemic and of a pale cream color; there were no points of hæmorrhage. The walls were thickened; the mucous membrane swollen; the ulcers were more numerous and larger in size at the cæcum. The smaller ulcers were the size of a dime; some of the larger extended around the gut, and were one half inch to an inch wide. The edges of the ulcers were regular, beveled, and thickened; the floor rather clean; the deepest did not extend beyond the muscular coat, the more superficial only includes the mucous membrane. The larger ulcers were on the tops of the folds of the intestines. A tenacious thick mucus covered alike the ulcers and the adjacent structures.

Condition of Other Organs. Liver enlarged and fatty. Kidneys markedly cirrhotic. Spleen normal. Heart slightly hypertrophied.

Microscopical examination revealed the changes in the intestine of chronic inflammation, and that the ulceration was of a simple nature and not due to tubercle.

A CASE OF CARCINOMATOUS SARCOMA OF THE LEFT TESTICLE.

Presented by DR. W. G. MACCONNELL.

This specimen was removed from a young man by Professor Brinton, at the surgical clinic of the Jefferson Medical College Hospital, on Wednesday, November 7, 1883.

History. Jacob A., aged twenty-six years, a clerk. About eighteen months ago he struck his testicle, in

mounting his horse, on the pommel of the saddle, from the pain of which he fainted. No inflammatory enlargement, however, of the organ ensued. Last May he noticed that the left testicle had begun to enlarge, which continuously increased in size until it had attained its present volume. There was a sense of heaviness in the tumor, but no pain was experienced until about two weeks prior to its removal, when he noticed a periodical pain of a burning nature, which, with the increasing size of the organ, caused him to apply for relief. It weighs about eight ounces, and measures in its long diameter four and a half inches, transversely three and a quarter inches, and about two and a quarter inches in thickness. No lymphatic involvement was present, nor was the cord involved; the veins of the scrotum were enlarged and prominent. The tunica vaginalis testis is slightly thickened and very opaque; the tunica albuginea is also thickened; a slight remnant of the epididymis exists in the form of a small fibrous lump. Its shape is somewhat that of a kidney, and upon section showed a moderately firm buff-colored tissue; it did not cry under the knife. In color and consistence it resembled the soft fibromata; distinct remains of the fibrous septa are to be seen; there are no cystic changes or any chondroid tissue present. Its macroscopical appearance and consistence suggested a spindle-celled sarcoma, and as such upon section I diagnosed it. Microscopically at a first examination, from the great ecstasy of the epithelium present, I was inclined to regard it as a pure medullary carcinoma, but after a careful study of several sections, I am inclined, by reason of the juvenescence of the connective tissue, both round and spindle cells being present, to call it a carcinomatous sarcoma. There was no history of syphilis, scrofula, or tubercle, nor had any member of his family ever labored under any form of tumor.

DR. NANCREDE called attention to the fact that modern microscopic study has shown that carcinoma of the testicle is a rare disease, most malignant tumors of that organ being really sarcomata. In this connection it is of much practical interest to note that the system becomes infected at a relatively late period of the disease, so that where a sarcomatous testicle is removed at an early stage of the disease prolonged immunity if not actual cure resulted. The inguinal and retro-peritoneal glands were those usually affected, their enlargement, by pressure, pain, etc., being the ultimate cause of death. Even more distant lymphatic glands are in rare cases involved.

DR. FORMAD agreed with Dr. Nancrede. Some years ago he had paid special attention to the study of malignant growths of the testicle and ovary. Of the former he had examined thirty cases, all of which were sarcomata. He did not believe in the existence of such a growth as true carcinoma of either the testicle, ovary, or kidney. The so-called carcinoma of those organs exhibits cells of a *connective-tissue* type rather than of an epithelial. Dr. Formad considered with many other observers that the so-called epithelial cells of kidney, testicle, and ovary are really *endothelial*, and gave reasons in support of this view. He further said that there is a variety of endothelial carcinoma occurring in the breast which is that usually described as alveolar sarcoma. Here the endothelial cells of the lymph spaces proliferate, but the glandular elements of the mamma do not participate. It is doubtless from the examination of such tumors that

Virchow, and Cornil, and Ranvier have gained the erroneous idea that true carcinoma takes its origin from connective tissue. The speaker would suggest the term "*endothelial carcinoma*" for such tumors instead of "*alveolar sarcoma*."

DR. DAVIS could not think that Dr. Formad was correct in absolutely denying the existence of carcinoma of the testicle, ovary, and kidney.

DR. MACCONNELL agreed with Dr. Nancrede as to the relative frequency of sarcoma of the testis, having examined a large number of such specimens. He could support the views of Dr. Formad as to the growths of the testicle originating largely in proliferation of the endothelia of the lymph spaces and tracts.

SARCOMA OF THE BREAST.

Presented by DR. G. E. DE SCHWEINITZ.

The speaker quoted the remark of Rindfleisch, that "the expression cysto-sarcoma is by no means to be conceived as the designation of a definite, perhaps round-celled, sarcoma with cysts, but it only tells us that a new formation with the textural character of histioid tumors has attacked the mamma and dilated its preformed cavities." This growth was removed from the person of a lady of middle age, married, but childless. She assigns no cause for its appearance. The growth of the tumor has been slow, it having originally been noticed six years prior to the date of operation. The weight of the mass immediately after removal was three pounds and one ounce. On palpation there was a distinct sense of fluctuation. The skin over the tumor was discolored, but not adherent. On section the growth is seen to be composed of two parts, the one about the size of a closed fist, and the other somewhat smaller. The section evacuated a quantity of bloody, mucus-like fluid. The centre of each mass is seen to be cystic, or, rather, the masses are the papillary and irregular excrescences which have protruded into the dilated ducts. The growth is composed of numbers of variously-shaped nodules, whitish or yellowish-white in color, but in some spots semi-translucent, and resembling somewhat colloid material. The microscopic examination of various portions shows similar results differing only in degree: Large, round-celled sarcoma tissue and some spindle cells, generally diffuse, but in places tending to alveolar arrangement. Here and there round, stellate, and spindle cells branched and anastomosing (mucoid tissue). Numerous blood-vessels, usually wall-less or mere channels passing through the tissue. In many places the sections show the enlarged ducts, cut transversely, and lined with a single layer of columnar epithelium. Surrounding them is a dense matrix of connective tissue. It may not be uninteresting to state that the specimen has been preserved in a solution of hydrate of chloral (twenty grains to one fluid ounce) after the manner originally recommended by Dr. W. W. Keen, with what success the beautifully fresh and natural appearance of the growth plainly attests.

—Dr. Henry Thompson, of Syracuse, has been found guilty of grave-robbing. The body stolen was that of a prominent resident of Camillus, a village near Syracuse, who died in March last, and it was discovered at the medical college in the latter place.

Medical and Surgical Journal.

THURSDAY, DECEMBER 13, 1883.

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THE PROSECUTION OF MANUFACTURERS OF ADULTERATED DRUGS.

WE stated in a recent editorial (November 22d) that several prosecutions were pending against vendors of adulterated drugs and milk in Massachusetts under the legislative act of 1882. A number of these cases have since been before the courts, and the convictions obtained against the dealers in adulterated milk are said to have already had an appreciable effect in improving the quality of the article sold in this market.

In the matter of drugs the policy of the Board of Health, Lunacy, and Charity is to prosecute the manufacturers who should and must know what they put upon the market, rather than the retailers, who may violate the law unwittingly. Accordingly charges of selling adulterated drugs were made against two firms of wholesale druggists of Boston, namely, Messrs. Rust Brothers and Bird, and Messrs. Billings, Clapp & Co. Tincture of opium was the drug selected upon which to bring the charge as being one of those in most frequent and general use. Under the Act of 1882 a drug is declared adulterated (1) if, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein; (2) if, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on *materia medica*, it differs materially from the standard of strength, quality, or purity laid down in such work; (3) if its strength or purity falls below the professed standard under which it is sold. The State analyst of drugs found that the sample of laudanum procured from Messrs. Rust Brothers and Bird contained only .81 per cent. of morphia in the opium used instead of 1.20 per cent. according to the standard fixed by the Pharmacopœia of 1880. The sample of laudanum from the other firm, Messrs. Billings, Clapp & Co., was even more deficient in morphia, containing only .72 per cent., less than two thirds of the required amount.

The defense in each case raised the point that the public issue of the Pharmacopœia of 1880 was not made until several months after the law of 1882 went into effect. The book was issued October 26, 1882; the law went into effect the preceding August. The defendants claimed the right to take any pharmacopœia issued by the Society, even if they went back to

the first one of 1820, because the act of the Legislature does not specify any particular pharmacopœia.

The counsel for the Board held that either the Pharmacopœia of 1870 or that of 1880 must be in force, and according to the testimony of the analyst, Dr. Davenport, the tincture fell below the standard fixed by either book. But the standard of 1880 had been adopted before the law was passed. The fact that the printer did not finish his work in a year or more had nothing to do with the question. The law never meant to have any one of the six standards made from 1820 to 1880 open for choice.

The judge decided that it was unreasonable to claim that the Pharmacopœia of 1850 or 1860 was the present standard. The Pharmacopœia of the United States is the last one published. The statutes, however, went into effect before the Pharmacopœia of 1880 was published. The judge would, however, rule that either the book of 1870 or that of 1880 was the Pharmacopœia of the United States, and it was not necessary to decide which one of those two. Subsequently it was ruled that the Pharmacopœia of 1880 fixed the standard under which the government could proceed.

Practically the only change made in the strength of the tincture of opium as it should be made under the Pharmacopœia of 1880, and as it really was made by all fair apothecaries under the revision of 1870, is that now ten per cent. of the powdered opium should be put into the tincture, while formerly but nine per cent. was required. The same powdered opium is used as formerly.

The Board proved its case against both the firms, but the first one escaped the penalty, it not appearing in the evidence, although subsequently established in fact, that the person who sold the drug was an authorized agent. Conviction was also reached in a third case, the defendants in which were the firm of Noyes & Co., druggists of this city. The penalty in these cases is a fine not exceeding fifty dollars for a first offense, and a fine not exceeding one hundred dollars for each subsequent offense.

It is entirely unnecessary to dilate upon the injury done to the public and the profession by the manufacture and sale of adulterated drugs, especially of such a drug as laudanum. The law of this State to prevent such adulteration is a just and necessary one, and the Board of Health, Lunacy, and Charity should have the cordial support of the medical profession in its efforts to enforce it, especially when, as we are persuaded is the fact, it desires to avoid the infliction of undue hardship in the discharge of its duty. The activity of the Board will be directed, we understand, mainly against the wholesale manufacturer, for whom carelessness in the preparation of such an article as laudanum, or of citrate of iron and quinine, another drug for adulteration of which a charge is pending against Messrs. Billings, Clapp & Co., is a most lame and impotent plea. The retailer who acts in good faith, and can show the source of his adulterated supplies, we doubt not will be dealt with in a liberal spirit, and it is directly for his interest that the manufacturer should be imbued with a proper respect for the law.

The Boston Druggists' Association has, we are told, addressed a remonstrance to the Board on its present process, emphasizing the propriety of warning a delinquent firm before proceeding against it. Such a position is a singular one to be taken by such a body, and we do not see how the Board could possibly entertain it favorably. Honest and capable manufacturers should not depend upon the State analyst for information as to the quality of the goods they offer for sale; nor would they either expect or desire from the Board a negative permission to sell adulterated articles until positively, specifically, and individually notified that they must reform.

THE MARKINGS OF ELECTRICITY.

THE occasional markings on the bodies of persons who have been struck by lightning have been described, and in a very few instances drawn, by observers. The arborescent appearances at times shown have led to fanciful attempts to attribute to the lightning a power of photographing neighboring trees and other objects. Such a power has been soberly held by numbers of people, but we doubt if there are many individuals who would not rather regard the stories of these ecchymotic pictures with some sort of mild incredulity. The senior demonstrator of anatomy in the University of Glasgow, Mr. John Yule Mackay, has published in the *Glasgow Medical Journal* of November a photograph of these appearances as they were exhibited on the arm of a boy of thirteen. As these markings are exceedingly evanescent the securing them by photographic process was exceedingly fortunate, and suggests the idea that the popularization of photography by the instantaneous dry-plate process will prove a boon to the profession by the retention of transitory appearances, and that it will in this manner undoubtedly play a large rôle in the not distant future in medico-legal cases. The boy in question was struck by lightning about eleven o'clock in the morning with three other boys who were standing with him in the doorway of an empty stable. One was rendered unconscious, and the other three partially so. The boy who furnished the photograph was for some time after gaining consciousness unable to remove his hands from his pockets, where he had placed them before the accident; there was also a sensation of numbness and cold in the arms, and the boy fancied they had been broken at the elbows. Later, complaining of a burning heat, his coat was removed, and the markings discovered. These were of an arborescent character, stretching from below the left elbow to the shoulder, and throwing branches of a less complicated description across the left chest.

The marks were of a ramified, tree-like form, and seemed to radiate from two centres as if the lightning had first struck the arm in two places and had thence broken over the surrounding skin. They were believed by many to be photographic images of a yew tree or of the fronds of a fern, but unfortunately for the holders of this theory no vegetation of such description was within sight. For two hours these

markings retained their original appearance. They were of a red color; the skin was slightly raised over them, and the superficial heat of the arm was greater than that of the rest of the body. Four hours after the accident they were photographed, and though faded were still clear. At half-past seven they were hardly visible, and next morning had entirely disappeared. We are indebted to Mr. Gunn, chemist of Duna, the father of the child, for promptly securing the first photograph of a phenomenon which so many would otherwise regard as fabulous.

The boy's clothes were unharmed by the lightning, and the buttons and metallic substances in his pockets were uninjured.

Mr. Mackay discusses the reasons for the phenomena, and concludes that in accordance with known laws the current tends to divide in a branching manner if conduction be hindered or the current be weak. The marks do not correspond with the vessels of the region. Their red color does not appear to be due to a charring or burning of the skin, differing markedly from the surfaces sometimes seen, on which a stronger current has fallen. The author is led to believe that these appearances owe their existence to

a change in the blood of the capillary net-work lying immediately under the surface, and that this change is a coagulation of its albumen by heat, the coagulation following closely the distribution of the electric fire upon the surface.

MEDICAL NOTES.

— Editorials and medical notes, correspondence, and miscellany have had to yield to the pressure of papers and society reports in the present issue of the JOURNAL.

— Physicians' diaries and visiting lists for 1884 are beginning to make their appearance. Those published by William Wood & Co. and P. Blakiston, Son & Co. are both very convenient pocket-books with well-arranged pages.

— At the Congregation at Oxford on November 1st, Prof. Michael Foster, Fellow of Trinity College and professor of physiology, and Prof. Alexander Macalister, Fellow of St. John's College and professor of anatomy, were presented by the Public Orator for admission to the complete degree of M. A. *honoris causa*.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 1, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrheal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York.....	1,206,590	540	191	18.24	17.67	3.61	2.85	5.32
Philadelphia.....	846,984	357	101	14.28	15.40	—	2.24	7.56
Brooklyn.....	566,689	220	—	18.00	15.00	2.25	2.25	8.55
Chicago.....	503,304	172	79	26.10	10.44	2.95	5.49	7.65
Boston.....	362,535	144	39	13.80	21.39	2.76	2.76	5.52
St. Louis.....	350,522	126	38	23.70	10.27	1.58	4.74	11.06
Baltimore.....	332,190	142	52	23.80	11.20	2.80	1.40	9.10
Cincinnati.....	255,708	96	28	14.56	10.42	5.20	3.12	3.12
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	99	36	23.23	19.19	3.03	2.02	3.03
Pittsburg..... (1883)	175,000	49	23	14.64	2.04	14.28	—	12.24
Buffalo.....	155,137	61	16	16.39	11.48	1.64	3.28	4.92
Milwaukee.....	115,578	36	19	22.24	11.12	—	—	8.34
Providence..... (1883)	116,755	41	—	9.76	19.52	2.44	2.44	2.44
New Haven..... (1883)	73,000	19	6	42.08	10.52	—	10.52	21.04
Charleston.....	49,999	37	20	16.21	5.40	8.11	—	—
Nashville.....	43,461	24	10	20.80	12.48	8.32	—	—
Lowell.....	59,485	22	5	13.62	27.24	—	—	4.54
Worcester.....	58,295	18	11	21.04	—	—	—	10.52
Cambridge.....	52,740	16	5	6.25	31.25	—	—	—
Fall River.....	49,006	20	4	10.00	15.00	—	5.00	5.00
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	17	2	5.88	11.76	—	—	—
Springfield.....	33,340	12	1	33.33	16.66	8.33	16.66	8.33
Salem.....	27,598	8	1	12.50	25.00	—	—	12.50
New Bedford.....	26,875	7	2	14.28	—	—	14.28	—
Somerville.....	24,985	9	2	22.22	11.11	—	—	11.11
Holyoke.....	21,851	5	1	40.00	40.00	—	20.00	20.00
Chelsea.....	21,785	6	1	16.66	16.66	—	16.66	—
Taunton.....	21,213	7	2	14.28	28.56	—	—	—
Gloucester.....	19,329	5	3	—	20.00	—	—	—
Haverhill.....	18,475	8	0	25.00	—	—	25.00	—
Newton.....	16,995	6	1	—	—	—	—	—
Brockton.....	13,608	—	—	—	—	—	—	—
Newburyport.....	13,537	5	1	40.00	—	—	—	40.00
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	1	0	—	—	—	—	—
Thirty-three Massachusetts towns..	177,948	50	9	—	—	—	—	—

Deaths reported 2385 (no report from New Orleans): under five years of age, 689: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 459, consumption 346, lung diseases 293, diphtheria and croup 159, typhoid fever 70, diarrhoeal diseases 62, scarlet fever 54, malarial fevers 25, whooping-cough 20, measles 19, cerebro-spinal meningitis 11, puerperal fever eight, erysipelas seven, small-pox two, typhus fever two. From *scarlet fever*, New York 10, Philadelphia nine, Brooklyn seven, Chicago and Milwaukee five each, Boston, St. Louis, Baltimore, and Buffalo, three each, Pittsburg and Worcester two each, New Haven and Cambridge one each. From *whooping-cough*, New York, Philadelphia, Brooklyn, and Baltimore, three each, District of Columbia five, Chicago, Cincinnati, and Somerville one each. From *malarial fevers*, New York 10, Baltimore six, St. Louis two, Brooklyn, Pittsburg, New Haven, Charleston, Nashville, and Lynn one each. From *measles*, District of Columbia 10, New York six, Brooklyn, Chicago, and Baltimore one each. From *cerebro-spinal meningitis*, Chicago three, New York, St. Louis, and Cincinnati two each, Lowell and Taunton one each. From *puerperal fever*, New York, Brooklyn, Chicago, Boston, St. Louis, and Charleston one each, Nashville two. From *erysipelas*, Philadelphia and Baltimore two each, New York, Buffalo, and Providence one each. From *small-pox*, Philadelphia two. From *typhus fever*, New York and Charleston one each.

Eight cases of small-pox were reported in St. Louis; scarlet fever 31, diphtheria 25, and typhoid fever 13 in Boston; scarlet fever 16, and diphtheria two in Milwaukee.

In the 52 cities and towns of Massachusetts, with an estimated population of 1,161,283 (estimated population of the State 1,922,530), the total death-rate for the week was 16.56 against 18.59 and 12.81 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending November 17th, the death-rate was 23.2. Deaths reported 3828: acute diseases of the respiratory organs (London) 445, scarlet fever 138, measles 103, fever 81, whooping-cough 65, diarrhoea 60, diphtheria 34, small-pox (Sunderland five, Birmingham three, Wolverhampton one) nine. The death-rates ranged from 15.7 in Leicester to 33.4 in Manchester; Bradford 19.9; Birmingham 20; London 22.2; Sheffield 22.8; Newcastle-on-Tyne 23.7; Nottingham 24.3; Birkenhead 25.9; Leeds 26.3; Liverpool 26.4. In Edinburgh 19.9; Glasgow 29.5; Dublin 25.2.

For the week ending November 10th, in 172 German cities and towns, with an estimated population of 8,755,812, the death-rate was 22.1. Deaths reported 3723; under five years of age, 1140; consumption 480, lung diseases 389, diphtheria and croup 286, diarrhoeal diseases 141, scarlet fever 102, whooping-cough 62, typhoid fever 48, measles and röteln 48, puerperal fever 25, typhus fever (Halle two, Beuthen one) three. The death-rates ranged from 10.8 in Wiesbaden to 36 in Königsberg; Breslau 24.5; Munich 26.9; Dresden 28.1; Berlin 24.9; Leipzig 22.1; Hamburg 24; Cologne 17.5; Frankfurt a. m. 16.3; Strasburg 16.7.

The meteorological record for the week ending December 1st, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	9.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	9.23 P. M.	11.23 P. M.	7.23 A. M.	9.23 P. M.	11.23 P. M.	7.23 A. M.	9.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Nov. - Dec., 1883.																			
Sun., 25	30.508	42	47	38	73	58	61	64	NW	E	E	10	13	16	F	C	C	—	—
Mon., 26	30.308	44	46	40	57	83	100	80	E	SE	E	20	15	9	C	O	R	—	—
Tues., 27	30.313	38	51	80	70	52	68	63	NW	NW	N	22	20	10	F	C	C	—	—
Wed., 28	30.298	34	45	26	61	40	38	46	NW	W	NW	6	12	16	C	C	C	—	—
Thurs., 29	30.366	24	32	18	53	43	64	53	NW	NW	S	12	6	9	C	C	C	—	—
Fri., 30	29.929	41	52	25	79	77	82	79	S	S	NW	4	10	12	O	O	C	—	—
Sat., 1	30.073	27	39	21	58	51	86	65	NW	SE	NE	11	8	10	C	O	C	—	—
Mean, the Week.	30.256	36	52	18				64										12.50	1.32

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 30, 1883, TO DECEMBER 7, 1883.

CARTER, W. F., captain and assistant surgeon. Relieved from duty at Washington Barracks, D. C.,—to take effect at the expiration of his present leave of absence, and assigned to duty at Little Rock Barracks, Arkansas. Paragraph 4, S. O. 224. Department of the East, November 30, 1883.

SHUFFELDT, R. W., captain and assistant surgeon. Now on sick leave, relieved from duty at Jackson Barracks, New Orleans, La. Paragraph 3, S. O. 224. Department of the East, November 30, 1883.

RICHARD, CHARLES, first lieutenant and assistant surgeon. Assigned to duty at Jackson Barracks, New Orleans, La. Paragraph 2, S. O. 224. Department of the East, November 30, 1883.

BOOKS AND PAMPHLETS RECEIVED.—American Neurological Association. Ninth Annual Meeting. Reported by Wesley M. Carpenter. Reprint. 1883.

A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M. D., Professor of Physiology in the University of Pennsylvania. Illustrated with 380 figures on 109 plates, many of which are beautifully colored: The drawings by Herman Faber from dissections by the

author. Section V., Nervous System. Philadelphia: Henry C. Lea's Son & Co. 1883.

Wiesen as a Health Resort in Early Phthisis, with Directions for Clothing, Diet, and Exercise in the Swiss Alps During Winter. By A. T. Tucker Wise, M. D., L. R. C. P., etc., etc. London: Baillière, Tindall & Cox. 1883.

On the Relation of Micro-Organisms to Disease. The Cartwright Lectures for 1883. By William T. Belfield, M. D. Reprinted from the Medical Record. Chicago: W. T. Keener. 1883.

Bacteria and the Germ Theory of Disease. Eight Lectures Delivered at the Chicago Medical College. By Prof. H. Gradle, M. D. Chicago: W. T. Keener. 1883.

On Photographing the Larynx. By Thomas R. French, M. D. Reprint.

Practical Pathology. A Manual for Students and Practitioners. By G. Sims Woodhead, M. D., F. R. C. P. E. With 186 colored plates. Edinburgh: Young J. Pentland. 1883.

Description of a Revolving Astigmatic Disk. By Charles A. Oliver, M. D. Philadelphia. Reprint. 1883.

The Possibility of Abnormal Ocular Conditions through the Sympathetic System Impairing the Function of the Uterus. By William S. Little, A. M., M. D. Philadelphia. Reprint. 1883. Catalogue of Dartmouth College and The Associated Institutions. For the year 1883-1884. Hanover, N. H.

A Catalogue of Medical and Surgical Books. By Robert Clarke & Co. Cincinnati. November, 1883.



SYPHILIS OF THE BRAIN AND MEMBRANES.

LECTURE.
A CLINICAL LECTURE DELIVERED AT THE PHILADELPHIA HOSPITAL, OCTOBER 3, 1883,

BY H. S. WOOLY, M. D.,

One of the Physicians to the Hospital, and Professor of Nervous Diseases in the University of Pennsylvania.

REPORTED BY WILLIAM H. MORRISON, M. D.

GENTLEMEN,—I propose devoting a few lectures to the consideration of cerebral syphilis. You have probably heard no didactic lectures on this subject, which is one of the most important in the whole range of nervous diseases. I believe that there are in these United States hundreds of people filling insane asylums and grave-yards prematurely because this affection is not recognized. As many of you have heard no regular lecture on cerebral syphilis I shall take the liberty of considering the subject somewhat didactically, using the cases for the purpose of illustrating and enforcing the important points to be remembered about this disease.

It so happens that I am able, in beginning the consideration of this affection, to show you a brain which was taken from a patient who died very suddenly a few days ago. The story of this case is that the man, F. B., aged sixty-two years, was a shoemaker, and had, during the last weeks, been in the out-wards of this institution, working at his trade. I wish you to note this point, that he was able to work with a lesion in his brain, which was undiscovered until suddenly the man died. A lesion was left to itself, necessarily lethal, but which might have been cured. On the 23d of August, we are informed, this man lay all day on a bench in a sort of stupid state. This is very interesting, for, as you will learn later, excessive somnolence is one of the most characteristic symptoms of cerebral syphilis. On the day following it was noticed that he frequently put his hand to his head as though in pain. There also seemed to be a partial loss of power in the lower extremities. The stupidity and pain in the head continued for three or four days, but did not attract enough attention to cause the man to be sent to the hospital, but suddenly he dies, and is received in the dead-house.

Here is a half of the brain. In the Sylvian fissure, at the position which I indicate, the membranes have grown fast to the brain. The brain and membranes are united together into a dense, whitish mass, which microscopical examination shows to be made up of small cells without any very regular shape, and among them are some large multi-polar cells. Beneath this mass is a large patch of brain inflammation and softening. I do not propose to go into the minute histology of cerebral syphilis, but only so far as is necessary to explain certain important clinical facts which bear upon the symptoms.

In the first place let me call your attention to the fact that in the great majority of cases cerebral syphilis originates, as it has here, as a disease of the brain membranes, and not of the brain substance; that even when a specific gummatous tumor destroys a portion of the brain substance the tumor originally started from the brain membranes; that the membranes are

primarily united with the tumor and form a portion of its substance, making the base from which it grows.

The next point in pathology which is illustrated to a certain extent by this specimen is that these tumors usually occupy the exterior of the brain. Sometimes a syphilitic tumor exists in the ventricles. I have seen cases where the tumor rose from the velum interpositum. The symptoms are then somewhat different from those which appear when the growth is on the outside. Very frequently the tumor develops in the fissure of Sylvius, where the membranes are abundant, and dip in between the lobes.

We find these tumors, or, as they are more properly called, exudations, in two particular forms. Sometimes they are irregular, globose, or lobate, as in the specimen before you. Sometimes instead of forming a distinct tumor they exist as a wide-spread exudation without any regular shape. A gummatous nutritive change at the vault of the cranium usually takes the form of an irregular, more or less ill-defined, tumor, while at the base of the brain the lymph is more spread out and tabular, so to speak.

I next approach the symptomatology of cerebral syphilis, but before taking up the symptoms I wish to refer to a single point. It is that the symptoms are due to a foreign body in the brain; in other words, there is nothing in the symptoms which is absolutely pathognomonic of cerebral syphilis. The more or less characteristic manifestations are not characteristic because the tumor is due to cerebral syphilis, but because cerebral syphilis especially haunts certain regions. For instance, if the symptoms denote an exudation at the base of the brain they simply indicate the seat of the lesion, but not its nature. We know, however, that exudations at the base of the brain occurring in adults who are not tubercular are, in ninety out of every hundred cases, due to cerebral syphilis, so that if there are symptoms of exudation in this situation we are almost certain that the brain disease is the result of cerebral syphilis. In the same way we know that syphilitic lesions are very common in the upper surface of the brain. If we have symptoms of a tumor high up we know that the probabilities, if the patient is past middle life, are in favor of brain syphilis. The symptoms are not pathognomonic, but they are often very characteristic because they indicate the existence of gross lesions in certain regions of the brain.

In regard to the etiology of syphilitic lesions of the brain, the fact that you obtain no history of syphilis is no reason for believing that the disease is not due to syphilis. Why it is we do not know, but certainly clinical facts show most positively that serious nerve syphilis is most apt to follow the lightest primary sores, and that where there are severe secondary symptoms serious cerebral disease rarely occurs. I of course leave out of consideration those cases in which the disease attacks the bones of the skull, producing secondarily disease of the brain. I repeat this. In the majority of cases where brain trouble of the character of which I am speaking develops there has been very slight primary trouble.

To illustrate this point I have brought here two cases which are probably suffering from cerebral syphilis, and yet in neither of them is there a distinct history of primary disease. In one of them there is apparently a very distinct history that primary trouble has not existed. I want you to have firmly fixed in your minds the fact that a negative history is of no

importance, while, of course, a positive history is of the greatest importance. If there is a history of distinct secondaries with the regular march of the disorder it will be an important aid in arriving at a correct diagnosis, but in very many cases you will find that the primary lesion has been slight and followed by slight secondaries, or that the patient denies altogether the existence of primary disease. Of course patients often deny this thing from willfulness, but many deny it not from willfulness but from ignorance. A case which I shall bring in acknowledges having had gonorrhoea, but positively denies that he ever had a chancre or chancroid. I see this thing continually in private practice. I have seen a number of cases in men occupying the highest positions of life, with healthy families, without any past history of specific trouble, with no history of a primary sore, and who have noticed no secondary symptoms, and yet undoubtedly the victims of cerebral syphilis, their whole lives depending upon the acumen of the physician in recognizing the true nature of their disease. Where, during any period of life, there has been exposure to the possibility of getting syphilis the mere fact that syphilis has not shown itself is not proof that the patient has not got it. It is in these cases that we see the finest and strongest brains melt down as if burnt out by a flame of fire, a fire which could have been extinguished if the physician had but recognized the nature of the trouble. I may seem to be too emphatic in regard to this matter, but I am so because the secret of success in treatment lies in the primary diagnosis.

In these cases the original disease usually dates far back. The primary lesion occurs it may be in youth, and the man reaches the age of forty, fifty, or sixty before the Nemesis of his misdeeds, in the form of a severe attack of cerebral syphilis, overtakes him. There are, however, cases in which nerve syphilis has developed almost immediately after the primary lesion. I have known one case in which within one month after the appearance of the chancre the patient was seized with numbness in the little finger and ring finger of one hand. The nature of the affection was not recognized, and the numbness persisted. Five or six weeks later the man had a violent epileptiform attack. There was a case of so-called precocious nerve syphilis. As a rule, ten, fifteen, twenty, or, as in one of my cases, thirty years intervene between the primary sore and the development of brain syphilis; but I have seen it several times within six months, and I have had a number of instances between three and eight months.

To sum up, we learn that the most important facts to remember are that cerebral syphilis is especially prone to follow light primary and secondary symptoms; that very frequently it occurs in persons who think that they have never had syphilis,—such persons may have had gonorrhoea with a concealed chancre, or they may have had a slight chancre which healed in a few hours, and was followed by very slight secondaries which have not attracted attention; and that usually it is a late phenomenon, although it may occasionally develop early.

We do not know what makes the syphilis attack the brain in these cases. There is a case reported in a French journal published in Bordeaux in which a man developed cerebral syphilis after an attack of sunstroke. Sunstroke, as you know, tends to produce inflammation of the membranes, and this inflammation once excited would be very apt to take on a syphilitic form.

Again, traumatism is sometimes followed by cerebral syphilis. There are a number of reported cases in which blows on the head have produced an outbreak of cerebral syphilis. I have had two cases in which syphilitic disease of the spine has followed an injury. Fournier and Buzzard believe that cerebral syphilis is especially prone to occur in those who use their brains to a great extent. It is possible that over-use of the brain may have some tendency to develop cerebral syphilis, but I think that it must be a very slight factor. Two thirds of the patients with nervous disease whom I see in this house have some form of nerve syphilis, yet very few of these people, if they have any brains, have ever used them. While occasionally there seems to be some exciting cause for the development of the lesion, yet in the great majority of cases we cannot say why it is that the disease has expended itself on the nervous system.

There are two distinct methods of development of symptoms. In some cases the disease declares itself suddenly, while in others the onset is gradual. The mass which I have shown you in this brain has not developed all at once. It has been growing for months, and probably for years, and yet in this case no one suspected anything wrong with the man, who was able to work with this large mass in his brain, until suddenly he was taken ill. A physician was called, and in a day or two he was dead. There you have, what is very frequently seen, a sudden outburst of symptoms. It is a very peculiar fact that a gummatous exudation, mass, or tumor, may go on developing for years without producing any symptoms, until suddenly the patient will be swept down by an outburst of symptoms.

In this woman whom I have brought before you, I do not know whether the disease is specific or not, but I do know that she has a basal growth of some kind; that she has been married to a drunken, worthless, husband; that she has lived a miserable, wretched life, and that her own habits as regards the use of alcohol have not been what they should have been. The chances are greatly in favor of her having been exposed to the cause of specific disease. The past history, and the knowledge that she has a growth at a part of the brain where these growths especially arise, renders it extremely probable that this is a case of specific disease. You see that I do not make a positive but only a probable diagnosis, and that is all that can be done in the majority of these cases. Let me here give you a practical point in regard to your own bearing. I have come to consider the history given by patients so worthless that I rarely inquire for it. If you are called to a man in a high position in life, a banker, a judge, or a preacher, you may be little better than a fool if you take the man back into the dead and rotten past and rake up memories which had better be forgotten. You have in your own hands the touchstone which will enable you to determine with sufficient certainty for all practical purposes whether or not the disease is syphilis. There are cases in which it is better not to ask, and if you habitually trust the statements of patients you will sometimes be misled.

I have brought this woman before you to illustrate the suddenness with which the explosion of the disease may occur. She asserts that she was perfectly well until one day, when she suddenly became blind. She has not had the symptoms of a clot, but those of a growth at the base of the brain.

This second case, the man suffering from headache

and progressive hemiplegia, illustrates one or two points to which I have referred. In the first place, in regard to the man believing that he has never had specific disease. He admits that he has had gonorrhœa, but denies all specific trouble. In the second place, it illustrates the point that the symptoms may come on gradually. The history of this man is that for eleven months past there has been a gradual loss of power in one arm, one leg, and one side of the face. I want you to remember what I have said in regard to the symptoms of cerebral syphilis being chiefly the symptoms of a gross lesion in some part of the brain. There may be monoplegia, hemiplegia, or paraplegia, according to the seat of the tumor. In this man there has been hemiplegia which has developed gradually. What does this slow development mean? It always means that there is some growing, progressive lesion. When there is a progressively developing hemiplegia there must be a progressive growth. The symptoms only indicate that this man has something growing in his brain. Whether the growth be syphilitic or not must be determined from other circumstances.

We have learned that the symptoms of cerebral syphilis are those of a gross brain lesion of some kind. If the tumor is over the centres which preside over word memory and word thought, or, in other words, if the tumor is down in the Sylvian fissure, pressing upon the island of Reil, there will be aphasia. If the tumor or growth is, as frequently it is, at the base of the brain, there will be paralysis of the parts coming from the base of the brain, and especially of the nerves which supply the eye. Basal growths not tuberculous, paralyzing the oculo-motor and other nerves supplying the eye, are rarely anything else but syphilitic. Syphilitic basal growths are very frequent. Remember, then, that centric squint, dilatation of the pupil, ptosis, and paralysis of the ocular muscles are in an adult almost certain evidence of cerebral syphilis.

Palsy of the facial nerve, however, has no such significance. You know the course of this nerve: at the base of the brain it is exposed like the other nerves to the effects of cerebral syphilis, but it so happens that the facial nerve passes through a long bony canal, and that it is very prone to rheumatic and other affections of its sheath, which cause swelling, pressure, and consequent paralysis. In nine out of ten cases peripheral palsy of the face is not due to syphilis. Trigeminal palsy, or palsy of the sensory nerve of the face, is sometimes, but not commonly, the result of syphilis. Occasionally *anæsthesia dolorosa* is produced by syphilis. This is a condition in which there is a loss of sensibility of one side of the face associated with the existence of exquisite pain. The affection results from a lesion of some kind within the skull pressing upon and at the same time inflaming the trigeminal nerve. There is loss of sensation because the nerve is pressed upon, and there is pain because the nerve is inflamed inside of the point of pressure. The sensation is referred to the peripheral distribution of the nerve.

The sudden attacks may involve, as they did in the woman I showed you, the special senses. They however usually affect the brain as a whole, and there are sudden epileptiform attacks, constant headache, meningitis, or a sudden attack of congestion of the brain, which may be of the nature of apoplexy, with or without hæmorrhage.

In this fourth patient we have the statement that

five years ago, when he was thirty-five, he had a sudden attack of epilepsy. When epilepsy comes on for the first time after the age of thirty it is almost always due to some gross lesion of the brain. I have never seen a case of epilepsy developing in an adult, in which some brain lesion, such as softening or a tumor, or something that the hand could be put on, could not be found.

Returning to our first patient, we find that in addition to the blindness, she is suffering from trigeminal palsy. Under treatment the palsy has diminished, but it is still quite marked. At first a pin could be introduced against the cornea without producing any reflex, and without her knowing it. There is, at the same time, paralysis of the facial nerve. She cannot entirely close the eye. When I saw the case for the first time the left eye was enormously swollen, and there was great chemosis in the cellular tissue in front of the eye. The eye-ball was protruded to such an extent that I at first thought that there was something growing in the orbit. When I returned from my vacation I found the eye-ball shrunken and the tumor all gone. The woman had simply paralytic ophthalmia due to the palsy of the trigeminal nerve. The protrusion was so great as to justify the diagnosis of a malignant tumor springing from the orbit, but was due simply to the intense congestion and inflammation of the cellular tissue surrounding the eye-ball, with affection of the eye.

Turning again to the patient who developed epilepsy in adult life, I desire, as I may not have the patient before you at the next lecture, to point out one very curious symptom, which is almost characteristic of cerebral syphilis. About four or five months ago the man became suddenly deaf, and it was only by yelling in his ear that he could be made to hear. This came on without any discoverable cause, and within a few hours, continued two or three days, and then he began to regain his hearing and, without any apparent reason for so doing, in forty-eight hours he could hear as well as before. On questioning him, I find that he has had another curious symptom. For two or three days he lost the power of speaking. This went away suddenly. He says that he could not think words. He has had, in other words, a temporary, paroxysmal aphasia, as well as a temporary paroxysmal deafness. There are cases of a sudden loss of power in one arm, coming on within a half an hour, and after lasting for a few days passing away. A few weeks later there may be numbness of the foot, developing into a hemiplegia lasting a few hours and followed by a gradual restoration of power. Then there may be an epileptiform attack with loss of power in one side, which is rapidly recovered from. It is rare that the organs of special sense are involved. In this man you have an instance of what I have never before met with, that is, paroxysmal deafness. The important fact to be remembered is that these inexplicable, sudden, varying, temporary nerve attacks, when not dependent on hysteria, are very characteristic of cerebral syphilis. They are dependent on the fact that cerebral syphilis is prone to develop with great rapidity after a period of latency, and to cause sudden and violent congestions in proximity to the tumor. In this man there was congestion of the higher brain, and a discharge of nerve force producing an epileptiform attack. At another time a sudden congestion and drowning out of the sense of hearing; and again, a sudden blush of congestion, affecting the

island of Reil, and word power was lost. In another case the cortical centres of motion in the arm are involved; or it may be the centres controlling motion in the leg, or it may be the powers of the brain which are connected with movements of the eye which are affected, producing a temporary monoplegia, or a squint, ptosis, or dilatation of the pupil, according as the case may be. These strange, unaccountable, temporary attacks of paralysis, now here, now there, are very characteristic of cerebral syphilis, provided hysteria is excluded. The difficulty comes in when hysteria and syphilis are associated.

There is one peculiar symptom of this disease which I have not yet mentioned because none of these cases illustrate it, that is, a strange somnolence. If you are called to a case, and find that the patient sleeps hour after hour, or day after day, and if on examining him there seems to be nothing the matter, the chances are greatly in favor of his having cerebral syphilis. You may also find a history of past headaches, or of epileptiform attacks, or if, on examining the eye ground, which you should always do in doubtful cases, you find choked disks, you know almost certainly that the disease is cerebral syphilis. Sometimes instead of somnolence there may be sleeplessness. Sometimes the sleeplessness precedes the somnolence. Sleeplessness occurs in almost all forms of brain disease. Somnolence is rare. It occurs in pachymeningitis, which is, in fact, very often due to syphilis, and in the gradual softening of the brain in old people. Excluding these diseases, this symptom is very characteristic of cerebral syphilis. I saw a case last week of headache, general loss of mental and physical power, and oculo-motor palsy, and the patient stated that before he had any severe symptoms he would go to sleep over his work. He would have to quit work and go home about four o'clock in the afternoon. He would then go to sleep about five and sleep until nine or ten the next morning. If he had been seen at this time, the proper diagnosis made, the touchstone applied, and the necessary treatment instituted, long years of disablement would have been avoided.

There is only one other point in reference to the symptoms of cerebral syphilis to which I shall call attention to-day, namely, that very frequently an acute attack of meningitis will be lighted up by cerebral syphilis. A man has, it may be, a chronic meningitis. He begins to have headache, which is nearly always present in cerebral syphilis. He goes to his work, is suddenly taken sick, has high fever, becomes maniacal, and is hurried off to an insane asylum, suffering it is said from acute mania, and dies,—dies of the epidemic of ignorance which prevails to such an extent among many physicians.

Probably you will remember this better if I relate a couple of cases. A young man came home one afternoon and sat down in his store, which was connected with the house. After sitting there a while, he suddenly commenced to scream. He was carried up-stairs, and he began to have convulsions. A believer in homeopathic dilutions was called, and ordered him the one thousandth part of nothing. The consequence was that every time the man was given the dose he went off into a convulsion, and the hard, rapid pulse and high temperature continued. A physician was then sent for, and at first glance thought that it was a case of hysteria, and proceeded to give an assafetida injection. The moment the syringe touched the anus such a convul-

sion was excited that the doctor went one way and the patient another. The physician then recognized the true nature of the attack and diagnosed acute meningitis. He bled the man twenty ounces, and he became quiet. The patient was carefully watched, and when the convulsions recurred ten or twelve more ounces of blood were removed by cupping, and he again became quiet. The man was bled altogether at least thirty ounces. The result was that the next morning instead of being in an ice box the patient was awake and rational. When he became strong enough to attempt to get up, a slight hemiplegia was discovered. The hemiplegia was incomplete, and it was not probable that it was due to a clot, for a clot after such an attack would be large enough to produce complete hemiplegia. I saw the case a day or two later and diagnosed it as one of cerebral syphilis. Under proper treatment the man rapidly recovered, but before he did get well the sign of the beast came out, not on his forehead, but on the palm of his hand, in the form of a patch of psoriasis.

Some years ago I saw a case at the University Hospital, which I diagnosed as cerebral syphilis, gave the man iodide of potassium, and sent him home. That night the man became unconscious and furiously delirious. A doctor afflicted with ignorance was sent for and diagnosed strychnia poisoning, and treated him for strychnia poisoning for four days. The man got no better, and it was thought well to send for the doctors who were asserted to have given the strychnia. The man of course died, and the autopsy revealed the correctness of the diagnosis which I made as soon as I saw the patient, namely, acute meningitis supervening on the chronic disease.

Original Articles.

TWO CASES OF PARAPHASIA. ONE WITH AUTOPSY.¹

BY DR. S. G. WEBBER, M. D.

THE following case is of interest clinically and pathologically on account of the peculiar form of disturbance of speech associated with lesion of the supra-marginal convolution, and on account of the pathological changes elsewhere.

Mr. — was attacked suddenly with an inability to make himself understood. He was seen by Dr. Bundy, who gave me the particulars of the attack. There was no paralysis of the limbs. The patient could articulate perfectly, could put words together, and made an effort to talk, but the words were not used in their right relations. Wrong words were substituted for those which he evidently wished to use. Writing and reading were not tested.

Two or three days after he entered the hospital under Dr. Denny, who kindly gives permission to use the record, he was unable to talk much, and gave no history of himself, except that he complained of a feeling of pressure on the left side of the head, and a slight pain in the same region. There were no local symptoms. He was rather excitable, and was said to have attempted suicide. A double-edged knife was found on his person.

He slowly improved, talked better when he was ex-

¹ Read before the Boston Medico-Psychological Society.

cited, was at times depressed, thought his mind was failing because he could not remember the first person plural of a Greek verb (*βουλεύω*). Once he had hallucinations of vision, perceived by himself to be such. There was an inability to write a sentence correctly which was dictated to him. He substituted a wrong word for one which was given him. A few days later he wrote more accurately from dictation.

1.

*The Republican
paper is a
vigorous
contest*

September 25, 1882.—Saw his mistake and tried to correct.

2.

*The Republican
managers are
a vigorous
contest*

September 25, 1882, second trial.—This was written instead of "The Republican managers are making a vigorous contest."

3.

*The Republican con-
vention of the 6.th
congressional district
made distinct.*

I saw him only a day before his leaving the hospital. He then said he felt dull in the morning, clearer in the afternoon. There was much tremor of face and hands. The right pupil reacted more sluggishly, did not dilate so widely as the left.

After he left the hospital I met him once. He was slightly peculiar in his manner, a very little excited, talked perfectly well, showed nothing unnatural in his gait, nor in the motions of his face or hands. There was only the peculiar excitability, which seemed to be rather an individual trait than anything pathological.

Three months after he was in the hospital he was brought in upon the surgical side, having cut his throat. Dr. Draper, who made the autopsy, kindly allowed me to examine the brain.

The pia mater over the vertex, and on each side as low as the fissure of Sylvius, and nearly to the anterior

extremities of the frontal lobes, was rather thickened and opaque. At the base it was firmer than usual, and bound together the vessels and nerves more firmly than normal. The arteries at the base were atheromatous in patches. This change was rather more marked in the middle cerebral and its branches, especially on the left side. The pia mater was not adherent, came off readily without tearing the cortex, excepting possibly in two very small spots on the upper surface of the temporal lobe, within the fissure of Sylvius. The posterior third of the first (superior) frontal convolution and the adjacent portion of the ascending frontal were slightly rougher after the pia was removed than the other convolutions. These parts were also slightly yellow in tinge, and contained many small dilated arterioles (miliary aneurisms). These aneurisms were scattered irregularly over the rest of the cortex, most numerous on the left side. Several cavities containing serum, without discolored walls, varying from one eighth to three eighths of an inch in diameter, were found in the white substance of the occipital lobes. Some of these had a vessel leading from them, around which the cerebral substance was firmer than usual, and the vessel seemed to be plugged.

In the left hemisphere, just above the roof of the lateral ventricle, was a yellow spot about half an inch in diameter. At the extreme posterior end of the fissure of Sylvius, just above its upper margin in the supra-marginal convolution, was a cavity about three fourths of an inch in diameter; this cavity extended into the white substance towards the lateral ventricle, and was filled with dark-red serum and crossed by many bands of fibrous tissue. In the outer member of the right lenticular nucleus adjoining the external capsule, but confined to the gray matter of the nucleus, was another old hæmorrhagic cavity, pear shaped, one fourth by one half inch. In the left frontal lobe the perivascular spaces were unusually large.

Around many of the dilated blood-vessels or aneurisms the spider cells were more prominent than elsewhere; the nerve cells seemed to have been pressed aside and crowded together. In one section the spider cells seemed most numerous, in another the nerve cells showed more plainly.

The outermost layer of cortex containing no distinct nerve cells was rather thick; the blood-vessels in the layer showed very distinctly, more so than usual. The deeper layers of the cortex did not differ materially from normal except about many of the blood-vessels.

Around many of the medium and small, not smallest, arteries of the cortex there was considerable change, the tissues were more deeply stained, and the spider cells were increased in number and in size, taking the carmine much more readily than usual, and not showing the same delicate structure as in other parts, often, also, filled with a homogeneous substance, staining evenly and having no nucleus. The walls of the blood-vessels were considerably thickened, resembling closely syphilitic arteritis.

The extensive disease of the arteries through at least a part of the cortex is interesting in view of the mental symptoms, not so marked as to lead one to call him insane, yet he showed an erratic and eccentric tendency.

The chief interest, however, is in the disturbance of speech and the cerebral hæmorrhage. The particulars of the attack are not complete, it is not known whether he was unconscious, or whether there was any tem-

porary paralysis; when he first came under observation there was neither of these symptoms.

The disturbance of speech was not that most frequently seen in aphasia, neither the amnesic nor the ataxic (anarthria), it was rather the confusion of words, "the inability to properly connect word images and the corresponding conceptions, so that, instead of the ones corresponding to the sense, misplaced or entirely incomprehensible word-images present themselves." Kussmaul calls this "paraphasia."

Kussmaul has described "word deafness" and "word blindness," which Wernicke names "sensory aphasia." The centres for these defects are located by Wernicke along the margin of the fissure of Sylvius in the first temporal convolution. Wernicke locates the lesion in paraphasia in the medullary tract connecting these centres of sensory aphasia, if I may use such an expression, with the speech centre in the isle of Reil. In the present case the lesion was just outside of this tract, yet so near that a hæmorrhage might indirectly, by exercising a moderate pressure, cause a temporary interruption in the function of the nerve fibres passing through this tract. That permanent damage was not done is shown by the fact that in a short time the power of normal speech was fully restored.

Fränkel¹ gives an interesting case in which there was loss of speech, of the power to write, or to understand speech or writing; the ability to understand writing and to talk returned, but the patient was still unable to understand speech. In our patient all forms of aphasic disturbance disappeared.

So far as this case is of value it tends to confirm Wernicke's views, yet it does not closely define the seat of the conducting tracts or of the different centres concerned in understanding or originating the different forms of symbolic communications.

In connection with this case I may report the following:—

Mr. B. was brought to me last June by Dr. Doe. In early part of May he found, on his way home in the cars, that he could not use the word he wished to, yet he knew what he wanted to say, and knew he used the wrong word. Also he could not write correctly. Three or four days after, he fainted in Dr. Doe's office. The use of the wrong word at that time was scarcely perceptible to one conversing with him. His general health was good; there was a slight systolic souffle at the base. June 1st he went away for a rest, staying ten days. On his return he was slightly better. Writing was not clear; he still confused the words. After his return there was a slight staggering or limping in walking, but so slight it was not possible for his friends to say which leg was at fault. He had, on the whole, become worse, and two nights before I saw him he had much trouble with his speech, and staggered much. A sensation of coldness behind the left ear, which had annoyed him for a year, still persisted; he had no headache; taste was natural; at times there was tinnitus in the left ear; no dizziness, no diplopia, no sensation of numbness. He said he could not read much, and on testing him it was found that he could not read more than a word or two correctly, would miscall the next word.

The pupils reacted naturally; the eyes moved naturally; the right side of the face was slightly drawn up; the tongue could not be protruded beyond the teeth. There was moderate incoördination of the hands, not

at all marked. The left patella reflex was less than on the right; sensation did not seem to be affected. In walking sometimes one leg seemed to be the weaker, sometimes the other; probably both were weak.

During the examination he could make himself understood only when he used short sentences. In attempting to use longer phrases wrong words were used which did not belong together. He seemed to understand all that was said, and when he was advised to stay at his cousin's house instead of taking a long trip to visit his sister he showed much emotion, and wept. Subsequently he failed mentally and physically still more, and in a few weeks died. There was no autopsy.

A CASE EXEMPLIFYING ONE OF THE LATER LESIONS OF SYPHILIS, WITH REMARKS.

BY ROBERT H. GRANDIN, M. D., NEW YORK.

THE case I would embody in this paper may well serve as a text for the few remarks I desire to make concerning a scourge, which, striking as are the advances of the medicine of to-day over that of yesterday, too often still thwarts the best directed efforts of the physician. It is in its later stages particularly that syphilis shows its destructive virulence, and when brought face to face with one of the tertiary lesions the question forces itself, Do we, as physicians, lay sufficient stress on the necessity of prolonged treatment, and do we bring to bear sufficient moral condemnation on the man or woman who, the subject of syphilis, communicates it to another?

My case is, in brief, as follows: Mrs. A., age thirty-five, married for fifteen years; one child fourteen years ago. This only fruit of the union was born syphilitic, and is now living syphilitic. Its mother had well-marked secondary symptoms towards the end of her gestation, and its father has not been as yet cured of the disease which he transmitted both to mother and child. My patient was variously treated by various gentlemen, at one time having been greatly salivated. My knowledge as to the nature of the treatment she had been subjected to up to a few months before coming under my care, is limited to the fact that, at one time, she received pills containing the green iodide of mercury. About August of the present year, whilst at Richfield Springs, without any special premonitory symptoms, she had a paralytic stroke, was a short time afterwards brought to this city, placed under my charge, and presented the following physical condition: There existed partial hemiplegia of the right side of the body; locomotion was just possible with assistance, use of right arm nil; tongue deviating a little to the right; pupils equal; vision diminished; temperature equal; control over bladder and rectum; loss of speech; no anæsthesia; slight contracture of the flexors of the right arm; frequent somnolence and nervous irritability; electrical reaction fair; laryngoscopic and ophthalmoscopic examination negative.

From the history of the case, together with the physical signs, the diagnosis of gummatous tumor of the left side of the brain was the most probable one. My prognosis was very guarded as to ultimate complete recovery, with the chances in favor of recovery from the hemiplegia. I was shown the prescription she had been given by an able practitioner of Richfield, and I continued it for a time with slight modifications. In a

¹ Berlin. klin. Wochenschr., August 29, 1883, page 501.

word, the treatment for the following six weeks consisted in liberal diet, massage, the faradic current to the affected muscles, ferruginous tonics, and the iodide of potash increased cautiously from thirty grains daily up to ninety grains, the limit of gastric tolerance in her case. Under this treatment the improvement was gradual but very marked up to the first of October, at which time she could walk unassisted, could use her thumb and forefinger to a degree, the contracture had almost wholly disappeared, the tongue no longer deviated, and articulation, to the extent of a few words, was present, though there was evident forgetfulness of the sound of words and inability to properly coördinate the muscles of the larynx. At this stage she had a menorrhagia, became melancholic, began to refuse her food, and a crop of syphilides appeared on her body irregularly distributed. I ordered the mercurial ointment, beginning with two scruples by inunction daily. On the 16th of the month she began to have "spasms," as her friends called them. I never happened to see her in one, but from the description given me I judge them to have been epileptoid in character, varying from one to six daily. I ordered one half drachm of the bromide of potassa daily, in divided doses, with the effect of subduing them for a time. Her condition, however, generally, had simply retrograded. Locomotion was lost, contracture and deviation of the tongue had returned, and there was a slight drooping of the right angle of the mouth. Great mental depression and cephalalgia. Suddenly, on the morning of the 31st October, after a severe convulsion, she passed into a comatose state, in which I found her a few hours later. The breathing was stertorous; incontinence of urine and feces; pulse 100, and feeble; temperature subnormal by a degree; frequent clonic convulsions. My prognosis was exceedingly unfavorable, and I asked a prominent specialist of this city to see the case with me. After a careful examination he agreed with me as to the probability of a speedy fatal issue, though he thought as I did that the patient might last a week. As for ultimate recovery, we agreed there was no chance. He suggested the substitution of the iodide of sodium in place of the potash salt, and of the stronger mercurial ointment (Squibb's) instead of the ordinary. I availed myself of his suggestions, and thereafter she received two drachms of the iodide of sodium combined with a half drachm of the bromide of potash in divided doses by rectal suppository, and a drachm and a half of the ointment, daily, with nutrient enemata (brandy, milk, cream) at regular intervals. On the fourth day from the onset of coma, the rectum refused the suppositories, and they were ordered by the vagina. The enemata were still retained. On the fifth day the patient was momentarily partially conscious for a few hours; towards evening the menses appeared, and the suppositories had to be omitted altogether. At the same time, notwithstanding great care towards prevention, there was slight salivation, and the ointment was discontinued. Convulsion after convulsion, of slight duration, succeeded one another, the temperature, which had been a degree or two above the normal for some days, increased to 104° F. (pulse 130), and remained at or near this point up to within four hours of the fatal issue. The stertor increased, ptosis of the right eyelid supervened, contracture of the right flexors increased to an extreme degree, and, early the morning of the sixth day, the patient died.

Remarks. The necessarily long clinical history of

this case forbids my taking up much further space. My remarks, therefore, will be few and to the point. The chief interest in the case centres in the localization of the lesion or lesions. Without post-mortem evidence any deduction is, of course, hypothetical. It is probable, however, that the symptoms yield us more evidence towards a correct diagnosis of the site than is usual in cases of the kind. Heubner, in his admirable *Analysis of Cerebral Syphilis*,¹ makes the useful subdivision into three fundamental symptomatic types, based on anatomical grounds. In the first there are psychical disturbances with epilepsy, incomplete paralyses (seldom of the cranial nerves), and a final comatose condition, usually of short duration; in the second there occur apoplectic attacks, hemiplegia, somnolence, phenomena of unilateral irritation, and, generally, paralyses of the cerebral nerves; in the third the course of the disease is similar to that of dementia paralytica. My case must, evidently, come partially under the second subdivision. I say, partially, for, to my mind, and the same idea was broached by my consultant, we must look in this case for a more generalized lesion than local growth, namely, an affection of the arteries. From a state of fair general health my patient had a slight apoplectic attack, emerged from it hemiplegic, and thereafter, notwithstanding rational treatment, slowly retrograded, with periods of improvement, up to the coma which ushered in the fatal issue. There existed paralyses of some of the cerebral nerves as well as of some of the motor nerves. The lesion, hence, cannot have been localized, but rather disseminated within, of course, limits. Heubner's pathological investigations have shown, that the lesion giving rise to the symptoms of his second subdivision is usually, if a new growth, situated at the base of the brain, either in the dura or in the subarachnoid space. In other words the lesion lies deeper than the covering of the inner surface of the bone, or than the bone itself. "It is evident that while the paralyses of the cranial nerves, in this form of the disease, are produced by the exudation at the base of the brain, the hemiplegias are due to changes in the great ganglia."² These changes in the great ganglia are secondary to disease of the arterial tract supplying them. The ultimate effect of this syphilitic disease of the arteries is, still according to Heubner, to cause a narrowing of the lumen of the arteries, whence insufficient blood supply and consequent degeneration of the ganglia. Now the arrangement of the cerebral arterial system is such that "the gray cortical substance of the brain, and the white medullary substance connected with it, as far as the roof of the ventricles, is supplied with blood-vessels on an entirely different plan from that which exists in the white substance at the base, and in the ganglia which lie above it and form the floor of the ventricle."³ The result is, in brief, that the arteries of the white substance are terminal, and those in the gray are collateral. When, then, there occurs a narrowing of an arterial lumen, that portion of the brain is, evidently, most in danger where the arteries are terminal. This is the basal portion of the brain; and it follows from all this that the effect of a narrowing of the lumen of one or other of the arteries supplying the base of the brain is apt to be of a permanent character, from the very fact that there is no collateral supply.

¹ Vide Ziemssen, xii., Am. ed.

² Vide Ziemssen, xii., p. 330.

³ Heubner, loc. cit., page 331.

I have borrowed at such length from Heubner because his remarks seem peculiarly *a propos* to my case. My supposition, then, is that in the case I have outlined the change in the arteries, which had been going on for some time, first declared itself at Richfield, when my patient, after an interval of unconsciousness, found herself hemiplegic. This attack was simply the beginning of a certain end. The arterial affection simply progressed to end in a permanent coma—the forerunner of death. Had a post mortem been made I think it probable the main change would have been found at the base, with, perhaps, secondary implication of the left frontal lobe. Whilst there is nothing in the history or the sequel to rule out the presence of a gumma, the above, it seems to me, is a more satisfactory and sufficient explanation. And just here a few words concerning this syphilitic disease of the arteries may not be out of place. To Heubner we are mainly indebted for our knowledge. He has written a monograph on the subject, and a résumé of his views is given by Quincke.¹ The affection has up to the present only been observed in the arteries at the base of the brain, and yet it is probable that arteries in other localities may be diseased in the same way. It is peculiarly a condition of the tertiary period; takes only months for development in contra-distinction to chronic endarteritis, which takes years. Its existence can only be diagnosed during life from the cerebral symptoms, the disease being generally circumscribed, and therefore giving rise to local symptoms. Whilst cure is possible such a result is a rarity.

As to the treatment, when the patient reached my hands it is questionable if the opportune time for any treatment had not nearly passed. These cases of late syphilis should, indeed, be earnest reminders to us of the necessity of prolonged and energetic treatment of any case of syphilis. Without much doubt if my patient had had, during the first half of her diseased period, I will not say proper, for all I know she had rational treatment, but constant treatment, the chances nowadays are that she would have been completely cured. Too often the fault of insufficient treatment, as regards time, must be laid to the door of the patient. But surely the best-intentioned physician has failed in his duty if he does not warn his patient clearly of the shoals ahead in case treatment be not long continued.

A point in the management of the case on which I would lay stress is the large doses of mercury used with apparently no good effect, certainly with little evident bad, for up to eight hours before the end my patient retained strikingly her *embonpoint*, the firmness of her flesh, even of the affected side, and presented but little evidence of cachexia. I believe that with proper care much larger doses of mercury can be administered than is customary, and I also believe that this drug is necessary, when indicated at all, in large dose for complete cure.

And now, in conclusion, what of the man on whose shoulders rests the onus of this woman's death, and whom the child of fourteen has to thank for a blighted existence? It may be that before marriage he had been assured the disease had been routed from his system. That it was not, the case I have reported is sufficient proof. What, then, of the physician who assured the man he was fit to be a husband? Or, rather, since the physician is to be presumed honest

in his opinions, what of our methods, what is our certainty in the assurance that the disease is ever, within reasonable time, completely dethroned? Cases are, of course, numerous where there has been complete cure, and thereafter healthy and fruitful union; but successful cases are apt to be published and cannot, for the reverse reason, be balanced against the unsuccessful. These questions are burning ones, are most important ones, and lead up to another, Should the syphilitic.—he generally becomes so through his own fault,—in our present lack of certainty as to cure in any given case, be allowed to marry at all? If there is no absolute safeguard against the chance of his infecting another being,—who becomes syphilitic not through her own fault,—why not treat him as in olden time the leper was treated? This view is extreme, I well know; it savors, perhaps, too much of antiquity to suit the present non-retrogressive age, but it is well to pause occasionally in our headlong career, and study antiquity for the sake of the sound lessons she can teach us. Till we find a sure specific against this scourge, let us make use of what measure of prevention is within us, strong and determined moral influence. There is no doubt but what the main source of syphilis is prostitution. The results from attempts made in various countries to regulate the social evil were not long since clearly stated by Dr. F. R. Sturgis in a paper read before the New York Academy of Medicine, and from this paper it is evident how little can be hoped for its repression unless public opinion can be educated and arrayed against it. Let the physician start the ball rolling, then; let him, in the first place, make light of no case of syphilis, however mild, and let him, in the second place, bring to bear all the influence within him against the marriage of the tainted with the untainted. If syphilitics must mate let them mate only with syphilitics. To the answer, "But this prevention you would have interfered with the liberty of the subject," I retort, "That is not interfering with the liberty of the subject which punishes him for his license."

A CASE OF SUDDEN DEATH DUE TO HÆMORRHAGE FROM THE HEPATIC VEIN.*

BY ALFRED F. HOLT, M. D.,

Medical Examiner for Middlesex.

J. C., an Englishman, fifty-six years of age, large and strongly built, though slightly hunch-backed, died May 15, 1883. For the last six or seven years of his life he had been engaged in a small kindling wood trade, doing some of the manual labor required by such a business himself. For the ten years before this time he had been a police officer.

Ten or twelve years before his death he began to have severe attacks of colic. These continued to occur at irregular intervals during his life, and for the last six or seven years he was never quite well, although able most of the time to attend to his business. During these years he had consulted a large number of physicians. Most of these pronounced his trouble gallstones, but some of them dyspepsia, and still others some obscure disease of the liver.

Seven days before his death, while in Boston attending to some business, he was suddenly prostrated with a very severe attack of pain in the region of the stom-

¹ Vide Ziemssen, vi., pp. 394 et seq., American edition.

* Read before the Section for Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Medical Society, November 14, 1883.

ach, nausea, and faintness. He was taken to his home in Cambridge in a carriage, and his physician, Dr. Dow, was immediately summoned, who found him suffering from severe pain, vomiting at short intervals, pale, and faint. The pain and faintness continued until evening, he having been taken sick about noon, when the doctor was hastily called again. He found him vomiting blood in the form of very large dark clots. This continued at short intervals for about one hour, when it ceased. A little over three pints of blood was vomited at this time. The pain and faintness continued for three days. Although these symptoms were somewhat relieved by stimulants and opiates, at the end of this time he was again attacked with the vomiting of blood, as before, in the form of very large black clots. This continued at short intervals until nearly two quarts had been ejected, when it suddenly ceased; and after this he was very weak, faint, and nearly pulseless. The pain continued a few hours after this vomiting, when it ceased. Although his mind was clear, he did not rally, but gradually sank, and died forty-eight hours later, or a little less than seven days from the commencement of the sickness. No blood was at any time passed by the rectum.

Autopsy twenty-three hours after death. There was no sign of decomposition. Rigor mortis well marked. Body that of a large, muscular man, and quite fat. There was a thick layer of fat over the abdomen. All of the abdominal organs were imbedded in this tissue. The walls of the chest were expanded in front and at the sides to such an extent as to make quite a deformity; and all the organs of the chest were above the fifth ribs. There was a slight adhesion of the left lung to the chest wall at the top, otherwise the pleuræ were everywhere clear, pale, and glistening. Pericardium normal, but on opening this sac the heart was seen to present a noticeably peculiar appearance, the right ventricle being distended so as to make a rounded prominence on its upper part near the auriculo-ventricular junction. The right auricle was also distended. Both of these distensions felt elastic to the touch. On opening this side of the heart there was an escape of a puff of gas, and the walls of the organ immediately collapsed. There was no blood in either of the cavities. The right ventricle was a little dilated, and its walls were slightly thinner than normal. Left side of heart empty. The whole organ was rather large. Its tissues were pale, but of a uniform color. The valves were in every way healthy, and but little blood flowed from the cut ends of the large vessels.

The lungs were very broad and thick, making up in these dimensions what they lacked in length. They were everywhere of a uniform pale color, with darker marbling, except the dependent portions, which were a little reddened. They were also everywhere crepitant, the cut surface showing nothing abnormal, except that the blood-vessels of these organs contained but little blood. The mucous membrane of the bronchi and trachea was pale, and in places smeared over with a little frothy mucus. The spleen was more than twice the usual size. It was fairly firm. Sections showed it of a dark-red or blackish color, and the pulp largely increased. But little blood flowed or could be squeezed from the cut vessels. Both kidneys were imbedded in large masses of fat. They were a little larger and firmer than usual; the capsules slightly adherent. The cut surface showed the cortical

part of a uniform pale red color, and of proportionate thickness. The tubular part was of a bluish tinge, and the blood-vessels could be seen as red lines. These organs contained but little blood. Ureters and bladder healthy. The latter contained a little urine. The stomach was large and flabby, and contained about a pint of liquid food. It, as well as parts of the transverse colon, was firmly adherent to the lower border of the liver. All its tissues were normal in appearance, except that part where it was attached to the liver, which was a little reddened. The pylorus readily admitted the thumb. The duodenum was empty. Opposite the head of the pancreas could be seen the papilla marking the entrance of the common bile duct, as large as the end of the finger, and projecting into the gut. The opening of this duct would readily admit a pencil. Just inside the duct, lying loosely in the canal, was a gall-stone of such a size as to make it a little difficult to force it through the opening into the intestine. The common duct increased in calibre as it approached the liver, until it and the hepatic duct were dilated into a sac or pouch of about two ounces capacity. The walls of this pouch were very thick and hard, and there was a deposit of a dense tissue around them. At the lower side of this sac, near where the gall-bladder entered it, was a cup-shaped depression the size of half a chestnut. When a little water was poured into this a shreddy mass floated up, being attached to the sides and bottom (recent ulceration). On the upper side of this dilated duct, and immediately opposite where the blood-vessels entered the left lobe of the liver, was a similar spot of ulceration, somewhat larger and irregular in outline. On handling a little blood was seen to flow from the bottom of this depression, and an opening was readily found leading directly into one of the vessels entering the left lobe of the liver.

I believed this to be a branch of the hepatic vein, but all of the tissues in this vicinity were bound together in such a confused mass I was not quite certain. The gall-bladder was much thickened, and contracted in such a way as to make its cavity very irregular, and of a capacity of not more than two or three drachms. Its mucous surface had wholly lost its honey-combed appearance. The opening between it and the sack was wide enough to readily admit the finger. Both the gall-bladder and sac when opened contained a little bloody fluid.

The right lobe of the liver was smooth and glistening; rather large, and a little darker colored than usual. The cut surface showed its cellular structure slightly fatty, and its blood-vessels nearly empty. The left lobe of this organ presented a remarkable appearance. It was of a uniform greenish-brown slate color, — smooth but not glistening; and the contrast between it and the right lobe was very striking. It felt firm. The cut surface was of the same uniform greenish-brown color. All appearance of structure had disappeared. A piece of this lobe could readily be broken with the hands; and the fractured surfaces had much the appearance of a nearly dried piece of mud treated in the same way. The larger blood-vessels could be made out in the mass. They were filled with a dryish brown-red material that remained formed when turned out of the vessel, but readily crumbled in the hand into a coarsely granular mass. The main vessels entering this lobe of the liver near the ulceration above described were filled with the same material.

The large intestine contained a little solid and semi-solid yellowish fecal matter. The small intestine was nearly empty, but contained a little of the product of digestion, of a yellowish color. Nowhere in this tube was there anything that looked like blood.

Unquestionably the source of the hæmorrhage was the open blood-vessel supplying the left lobe of the liver; the blood readily finding its way into the duodenum by means of the largely dilated duct and its opening into the intestine, and through the rather open pylorus into the stomach. Why all of the blood should take this course and none of it go down the intestinal canal, as it apparently did not, is one of the points in this case seemingly worthy of discussion.

Of course the gas accumulating in the intestinal canal after death found its way by means of the same open vessel to the right side of the heart.

Hæmatemesis, with the blood coming from such a source, must be exceedingly rare, and so far as I am able to learn this case is unique.

The peculiar condition of the left lobe of the liver I have never seen before. I believe it to have been caused by a complete cutting off of the blood supply, producing a necrosis of the part.

REPORT UPON THE ADULTERATION OF FOODS AND MEDICINES.

BY DR. E. F. DAVENPORT.

ACCORDING to the *Sanitary Engineer* of November 15th the President of France on September 27, 1883, created, in connection with the Ministry of Commerce, a Council of Reference for municipal and departmental laboratories. This council is composed of five members, namely, M. Wurtz, President of the Council of Public Hygiene of France, MM. Pasteur, Brouardel, and Grimaux, members of the same council, and Armand Gautier, member of the Council of Public Health of the Department of the Seine.

The duty of this council is to advise:—

(1.) On the reports submitted to it by the directors of laboratories, or by municipal and department authorities.

(2.) On the methods to be employed in laboratories for the examination of articles of food.

(3.) On standards for purity of articles.

(4.) On all technical questions connected with the operations of government laboratories and analysts.

This decree is based on a report from the Minister of Commerce, M. Herisson, of which the following is a synopsis: The municipal laboratory of Paris has done such good work in checking adulterations, and so many other cities are following that example, that it becomes the duty of the general government to no longer remain passive, but to encourage and aid such efforts for the prevention of fraud. By the advice of this general council the local laboratories will work with that unity of purpose and uniformity of method without which there can be no efficacious check upon frauds in food. Articles condemned as adulterated at Paris cannot be merchantable in other departments, owing to different methods or standards, and thus honest commerce will be guaranteed as well as public hygiene.

According to the *Analyst* of April, the following decree concerning the prohibition of poisonous colors for

the coloring of certain alimentary substances and articles of food went into operation in Germany on April 1st:—

(1.) The use of poisonous colors for the manufacture of food products or articles of food intended for sale is prohibited. Those which contain the following materials or compositions are considered as poisonous colors within the meaning of this enactment: Antimony (oxide of antimony), arsenic, barium (except sulphate of baryta), lead, chromium (except pure chromic oxide), cadmium, copper, mercury (excepting cinabar), zinc, tin, gamboge, picric acid.

(2.) The preserving and packing of food stuffs or food products intended for sale in wrappers colored with the above cited poisonous colors, or in barrels in which the poisonous colors are so employed that the poisonous coloring matter can pass into the contents of the barrel, is prohibited.

(3.) The employment of the poisonous colors enumerated in Art. 1 is prohibited for the manufacture of playthings, with the exception of varnish and oil paints made of zinc-white and chrome-yellow (chromate of lead).

(4.) The use of colors prepared with arsenic for the manufacture of paper-hangings, as well as that of pigments containing copper prepared with arsenic and of matters containing similar colors for the manufacture of materials of dress, is prohibited.

(5.) The putting on sale, and the sale, wholesale or retail, of food stuffs and food products preserved or packed contrary to the regulations of Arts. 1 and 2, as well as playthings, paper-hangings, and dress materials manufactured in contravention of the directions of Arts. 3 and 4, are prohibited.

In connection with the use of colors containing arsenic, according to the *British Medical Journal*, June 23, 1883, a committee appointed by the National Health Society of Great Britain have reported a special modification of Marsh's test as most suitable for a standard test to be inserted in an Act of Parliament, also special detailed instructions for the carrying out of the Reinsch's test by those preferring this method. These would both insure the absence of more than 0.001 grain of arsenic in sixteen square inches of surface. This, in the case of the Marsh's test, being determined by its failing, when treated as directed, to yield a mirror in a tube one eighth inch internal diameter, sufficient to cut off at any point a black line on a white ground, technically known as thick rice (eight to pica).

Specimen line.

According to the *Boston Journal* of December 5, 1883, in the complaint made by the Massachusetts State Board of Health, Lunacy, and Charity against some wholesale druggists for having violated the Act of 1882 against the adulteration of food and drugs by the sale of a drug which differed in strength, quality, or purity from the United States Pharmacopœia (the standard required when sold under or by a name recognized therein), the court ruled that in accordance with the Act of 1882 the United States Pharmacopœia, Revision of 1880, had become part of the law of the Commonwealth, and the government could proceed under it.

—Scarlet fever is prevalent at Trenton, and diphtheria at New Brunswick, N. J.

Hospital Practice and Clinical Memoranda.

PURPURA FROM QUININE.

BY E. WIGGLESWORTH, M. D.

PATIENT, a respectable woman, aged fifty-two years, was referred to my clinic at the City Hospital by Dr. C. F. Folsom. She had received in his department twelve quinine pills, of one grain each, for neuralgia. She had never suffered before from any disease of the skin.

The first pill was taken the 12th October at four P. M. At five P. M. she noticed upon the left fore-arm a scarlet, non-elevated, irregularly circular patch, about as large as a silver half dollar. This itched and burned and was somewhat painful, especially on pressure. During the day there were three or four chills, with fever between. Fever worse at night, with nausea, "neuralgic" headache, tinnitus aurium, and weakness. More spots like the first appeared during the night, covering the fore-arms and ankles. These all increased in size and in severity of subjective sensations during the following day (13th October), confining her to her bed. No new spots, however, appeared after the night of the 12th to 13th inst.

Not attributing the eruption to her medicine she continued her pills, taking the last one after dinner Wednesday, 17th inst. From the 15th to the 17th all the symptoms were at their height.

Wednesday (17th) she began to feel easier, and has since grown steadily better.

Friday, 19th. Complaints of weakness. The spots are well marked, but not swollen, hæmorrhagic patches, not disappearing under pressure.

October 26th. Patches dull in color, desquamating slightly, with some itching.

October 29th. Desquamation more marked; color, a deep brown. No subjective sensations unless the spot is struck.

November 2d. Patches have scaled and the color has faded, although still evident.

November 9th. Patient called to report recovery. No further trouble of any kind, and merely a slight pigmentation marking the site of the patches.

Treatment. Hygiene; tonics, namely, iron, and, *experienti gratia*, "celerina," from which she reported benefit. Externally astringent ointments, zinc, etc.

Reports of Societies.

BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

THE Society held its twentieth regular meeting on the evening of November 1st at the house of Dr. Jelly, DR. COWLES occupying the chair.

DR. S. G. WEBBER read the paper of the evening, entitled

TWO CASES OF PARAPHASIA, ONE WITH AUTOPSY.

In the discussion following the reading of the paper DR. DENNY said:—

The case of aphasia reported, which came under my care at the City Hospital shortly after the beginning of the trouble, interested me from the fact that there

was (1) no evidence of there having been any right hemiplegia, as is usual; (2) that the aphasia and agraphia rapidly, and in equal proportion, showed evidences of improvement until both nearly or quite disappeared before discharge from the hospital; (3) that there was no hemiopia and no word-blindness, while the lesion discovered after death is located in the inferior parietal lobe. But three cases of word-blindness with autopsies are on record, and in all these there were lesions of the inferior parietal lobe, and in two there was lateral hemiopia;¹ (4) the lesion found did not explain, from its location, the cause of aphasia.

From the comparatively rapid restitution of the faculty of speech while the lesion remained, which probably occurred simultaneously therewith, we may assume that the aphasia was due to some disturbance of circulation temporarily affecting the integrity of the functions of the third frontal convolution or of the fossa Sylvii, which occurred at the same time, and disappeared from any local point of view thereafter. It has been said that agraphia associated with aphasia is evidence of a considerable mental impairment, and I was interested in studying the degree of mental capacity to note that while there was some failure of mental power, probably, yet it was not sufficiently pronounced to have interfered with the validity of a will nor a contract.

The first patient had rather that form of aphasia which Kussmaul calls paraphasia, not complete amnesic aphasia. There is no autopsy recorded, that I am aware of, where that was so prominent a symptom as it was in this case, and where so few other symptoms were present. Wernicke locates the lesion which will cause this form of disturbance in the commissural fibres uniting the sensory speech centres with the psychic speech centre. The lesion in the present case might well have exerted an indirect influence upon these fibres to temporarily inhibit their functioning. The lesion producing word-blindness needs to be more accurately localized. It is certain that that centre was not directly implicated, as the power of reading returned if it had ever been lost.

In the second case there was word-blindness and paraphasia, but no word-deafness. An autopsy would have been most interesting.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.²

ALBERT N. BLODGETT, M. D., SECRETARY.

SUDDEN DEATH DUE TO HÆMORRHAGE FROM THE HEPATIC VEIN.

DR. A. F. HOLT, Medical Examiner for Middlesex, presented a paper³ upon a remarkable condition found at the judicial autopsy of a patient dying under peculiar circumstances. The cause of death here reported, namely, hæmorrhage from the hepatic vein, has not, so far as known, been previously observed. The case occurred in the practice of Dr. Dow, of Cambridge, from

¹ Einige seltene Formen von Wortblindheit (Cecité verbal) aus Prof. Charcot's Klinik, Emanuel Heczel, Wiener med. Presse, No. 26, 1883.

² Concluded from page 566.

³ See page 584 of this number of the JOURNAL.

whose notes the clinical history as here given has been copied.

DR. F. A. HARRIS, Medical Examiner for Suffolk, said that the strange and heretofore unknown occurrence recorded by Dr. Holt is valuable in making us acquainted with a new causation for sudden death. The medical examiner is required to investigate all cases of death of a sudden or suspicious character, and it no doubt may happen that cases are returned as due to disease of the heart, no other ascertainable lesion existing, which may be due to some cause not hitherto reported and entirely unknown. In many cases some obscure disease might easily be quite overlooked. Among such causes is aneurism, which, even when of small size, may at times obstruct the nutrition or disturb, and at length entirely suspend, the function of important organs. In one case, an unsuspected small aneurism of the internal carotid caused obscure cerebral symptoms, and finally death, from pressure upon one of the pneumogastric nerves. Aneurism of the arch of the aorta may be suspected from the occurrence of disorders of the vocal apparatus in the larynx, not due to any organic local disease, when the existence of aneurism is not evident from any other symptom. In such cases the existing disease may be so slight that it may escape observation at the autopsy, and the death of the patient be charged to some other cause. The medical examiner is required to give a cause of death in all suspected cases, the law requiring him to ascertain the manner by which the person met his death. For this reason, if for no other, all cases of death from rare diseases should be reported, for the benefit of State and local Boards of Health, as well as for statistical and other purposes.

DR. FITZ considered the paper extremely interesting, and was glad to have heard the report of so rare a case. He said he had never seen anything of a similar nature in his personal experience. Gall-stones may occasionally become a cause of ulceration of the gall-bladder, and secondarily lead to much further mischief. The reported condition of the liver is very remarkable. Such a change is occasionally observed in the lung as a wedge-shaped necrosis of a part of the pulmonary structure due to embolism of some vessel. The necrosed portion then quickly becomes the seat of gangrene, and generally goes on to a fatal termination. The presence of gas in the heart is interesting. The opinion of Dr. Holt that the gas was formed from decomposition after death might be criticised, as it might quite as easily enter the venous channels during life.

DR. WEBBER asked if gas, entering the circulation before death, would not be evident from a frothy condition of the blood on opening the heart.

DR. FITZ replied that while this is often the case it is not necessarily so. It may escape as a free gas. Atmospheric or gas embolism is sometimes observed in other parts, especially in the lungs.

DR. PRINCE observed that pancreatic apoplexy¹ may be accompanied by many of the symptoms mentioned in this paper, and quite generally vomiting occurs.

DR. CHURCH, of Cambridge, presented the following

NOTES OF A PECULIAR CASE IN WHICH THE AUTOPSY SHOWED CONGENITAL ABSENCE OF THE LEFT KIDNEY.

On Tuesday A. M., November 6th, I was called to

¹ A report of two cases, with references to fourteen other cases, was read before this Section, May 6, 1882.

attend Mrs. L., a Swede, in confinement. On arriving at her house I was shown into a room containing a bed, and upon it lay a well-dressed woman, apparently forty years of age; presuming her to be Mrs. L. I approached the bed, and made the inquiry if she was the person to whom I was called, to which she responded in the negative, saying that she was a friend of Mrs. L.'s, and had arrived from Vermont the evening previous, and had not felt well since her arrival. She complained of pain in the stomach and back, with slight headache, but thought she had taken cold, and a little rest would suffice to restore her to usual health. I then passed on to attend Mrs. L. in an adjoining room, and did not see Miss A. until three or four o'clock in the afternoon, when I obtained the following history:—

Was born in Sweden; was forty-five years old; came to this country two years ago; had always been well excepting "slight touches" of dyspepsia and occasional sharp pains in the epigastrium. Menopause fully established before she left Sweden. Had worked as a domestic in a farmer's family in Vermont for nearly two years. Said that the bowels were regular, and appetite usually good. Never used stimulants or narcotics.

When asked if she had not better have some medicine, she said No, as she thought rest and diet would be all that was necessary. Saw her on the following morning while visiting Mrs. L. Said she had not slept during the previous night. Bowels and bladder had been evacuated during the night, but the pain in the back and stomach had not subsided, and she had vomited twice during the morning, and had an attack of epistaxis and severe headache. The tongue was very dry, and in the centre covered with a thick, brown incrustation; some sore throat. Examination of the chest gave negative results; the only peculiar feature was the feebleness of the heart sounds. Pulse 88; temperature 96.5° F.; respiration normal; slight tenderness on pressure in the right hypochondrium. Warm applications and stimulants were ordered, and at noon she got up, went into the kitchen, and drank some milk and tea. Did not see the patient again until Thursday A. M., at nine o'clock, when I found her comatose. I was told by the people in the house she had slept all night. At the time of visit the respirations were heavy, tongue and mouth as dry as parchment, and mouth and throat full of a mixture of dried blood and saliva; pulse 88; temperature 95° F.; pupils dilated; marked pallor, and a peculiar pinched expression of the face. Feeling that the case would prove fatal, and knowing that the patient had no relatives or friends in this country, I asked City Physician Bryant to see her. Pulse at time of visit, 12.30 P. M., 90; respiration normal; temperature 95° F.; patient profoundly comatose. At five P. M. she became pulseless, and expired at nine P. M.

Examination of the urine gave the following results: color pale; reaction neutral; specific gravity 1010; large trace of albumen; urea slightly diminished; phosphates and chlorides diminished. Microscopic examination showed triple phosphates, no pus or blood, a few degenerated renal epithelium cells, but *no casts or fat*.

Feeling that, either from imperfect memory or inability to understand or express herself in our language, the history given me by the patient was incorrect, I wrote her employers at Williamstown, Vt., and obtained the following additional history:—

First. That she had suffered much from what had been called by a resident physician dyspepsia.

Second. That one year ago she had an illness of five weeks. Diagnosis, "ulceration of the lung and slow fever." That previous to coming into their employ she had visited the Massachusetts General Hospital, for nausea and suppression of menses, and was thought to be pregnant.

Third. During the last year, though her appetite was good, she complained of feeling weak, of having headaches and frequent attacks of severe epigastric pains and cramps in the lower limbs, also of some dizziness.

Fourth. That large quantities of urine had been voided, especially during the night, for a long time.

Fifth. That when she arrived at Mr. L.'s on Monday night she complained of feeling very dizzy, and trembled violently.

Sixth. That for the past eight or nine months the patient had complained of sleepiness during the day, and imperfect vision.

The autopsy was made by Medical Examiner A. F. Holt, Saturday morning, November 10th, to whom I am indebted for the following report:—

"The body examined was that of a Swedish woman forty-five years of age. The heart was enlarged, particularly the left side. The left lung was adherent throughout. Spleen normal in size and appearance. Left suprarenal capsule in its usual position, but a little larger than normal. No left kidney, renal artery, or ureter could be found, or anything to indicate that they had ever existed. The right kidney is the one here shown. It is very small, not larger than a large hen's egg, and shaped much like one. The whole organ feels firm and rather hard. The capsule is much thickened and adherent. The cut surface, when removed, was of a uniform grayish color, with darker mottlings. The line between the cortical and tubular parts could not be made out at that time; now, as it has been in dilute alcohol for a day or two, it can be distinguished. The greater part of the organ seems to be made up of the cortical portion. The whole organ, without doubt, has undergone some marked change, probably interstitial nephritis, but of this I am not certain, as no microscopic examination has been made.

"The liver was a little larger than usual. Stomach and intestines apparently healthy

"In my experience in making autopsies, only in one other case have I found but a single kidney; this was in a man, sixty-five years of age, who died of cancer of the stomach. In that case the single kidney was very large and healthy, and, as in the present case, it was the left kidney which was wanting. I believe that both of these cases were congenital."

Dr. Church also exhibited the vermiform appendix of a patient who died from perityphlitis and peritonitis, and in which the cause of the disease was found to be an ordinary brass pin, which had been swallowed, had passed through the stomach, duodenum, and the entire length of the small intestine, and had entered the vermiform appendix, head downward, where it had awakened a violent inflammation with the subsequent fatal result.¹

Adjourned at 10.40 P. M.

NEW YORK ACADEMY OF MEDICINE.

THE PREVENTION AND TREATMENT OF PUERPERAL SEPTICÆMIA.

At a meeting of the Academy of Medicine held December 6th, after the usual routine business and the nomination of officers, Dr. T. GAILLARD THOMAS read a paper on the above subject. Having made a forcible introduction, in which he urged the necessity of such a paper at the present time, he went on to say that during the last quarter of a century great advances had been made in the treatment of febrile conditions incident to the puerperium. Long before this time the communicability of puerperal disease was recognized, but the subject had assumed more importance since the introduction of the germ theory. Ever since the time of Hippocrates, more than two thousand years ago, the profession had been struggling to master the hydra-headed monster, and it was only now that it was beginning to find its way out of the darkness in which it had hitherto been working. We were now at last beginning to understand how to treat puerperal septicæmia.

Dr. Thomas then described some of the characteristics of the parturient condition. Among these was the great excess of fibrine which the blood contained, thus presenting a marked tendency to embolic obstructions and to the development of sepsis and zymosis. Secondly, the nervous system was in a state of plus excitability, so that a small amount of urinary poisoning produced convulsions, and any mental disturbance was liable to result in violent mania, while derangements of digestion that would scarcely occasion the slightest inconvenience at ordinary times became a very serious matter. He then described the condition of the uterus and its appendages in the puerperal state, alluding particularly to the small rents or abrasions that were liable to be caused by the process of delivery in the cervix, the vagina, and the vulva, and over which flowed, even in perfectly natural cases, the ichorous and irritating lochial discharge. Ordinarily, however, this gave rise to no unpleasant consequences, and a fatal result was the very rare exception.

Then describing the symptoms of the onset of an attack of puerperal septicæmia, he said that not uncommonly the attending physician consoled himself with the idea that the trouble was only malaria or "milk fever," and even if he recognized the true nature of the affection he was too apt to postpone the adoption of energetic measures until the disease had advanced to such a stage that its progress could not be arrested. Were this the case we should find within a week that parenchymatous metritis, lymphangitis, phlebitis, peritonitis, endocarditis, pneumonitis, pleuritis, or other inflammatory process due to the septicæmia, had become fully developed, and that finally the patient would die from high temperature or exhaustion.

It was difficult to give an exact definition of puerperal fever, Dr. Thomas continued, but he was unwilling to adopt any which did not acknowledge the affection to be septicæmia, no matter what form it assumed. The cause of the disease was absorption of a poison by solution of continuity in the genital tract. As long ago as 1871 Hervieux had formulated his opinion in the following words: "I believe in the multiplicity of puerperal diseases. I believe in their common origin from puerperal poison." He also quoted from the

¹ The above case was reported in full in the JOURNAL, vol. cix., p. 299.

report of a distinguished committee of the Berlin Obstetrical Society.

As to the matter of nomenclature, the Dublin School of Obstetrics had recently proposed the word "metria" instead of puerperal fever, but he did not consider that it was in any way better than the old term. On the other hand the term puerperal septicæmia conveyed a clear and definite idea of the nature of the affection, and in spite of the fact that complications were so frequent he thought it should be adopted. It had also been recommended by Barnes, though the latter had insisted that it should be adopted only with the understanding that the term did not imply a distinct and specific poison. Personally he believed that there was a specific poison.

Although many investigations were at present being made in regard to the subject, it was impossible as yet to state the exact nature of this poison. But notwithstanding the fact that this remained unknown we did know that such a poison existed, and that it could be introduced into the system in only two ways, namely, through the atmosphere and by contact of the physician's or nurse's fingers or of clothing or bed-covers with the genital tract.

It was only in regard to the management of cases in private practice that he proposed to speak, as in all well-regulated lying-in hospitals positive rules for the prevention of puerperal septicæmia had long been adopted. In private obstetrical practice, however, a laxity prevailed that was nearly akin to criminality. The following rules were then suggested for the prophylaxis of puerperal septicæmia:—

(1.) The room should be cleared of every unnecessary article and of all curtains and upholstery as far as possible, after which the floor, walls, ceiling, and furniture should be well sprinkled with a ten per cent. solution of carbolic acid or a solution of mercuric bichloride of the strength of one part to one thousand of water.

(2.) The nurse and physician should be scrupulously clean about their persons, and, if either had been exposed to the poison of scarlatina or other septic influence within fourteen days, should use such a disinfecting wash as a saturated solution of boracic acid.

(3.) As labor sets in, the nurse, having cleansed her hands with a stiff nail-brush, should make a warm vaginal injection of a solution of mercuric bichloride or other antiseptic, and should repeat it every four hours.

(4.) Both the nurse and physician should use a solution of mercuric bichloride (1 to 1000) upon their hands and every instrument or utensil employed during labor.

(5.) The third stage should be efficiently produced, and ergot, in moderate doses, should be subsequently kept up three times a day for at least a week.

(6.) At the end of labor the physician, taking nothing for granted, should make an examination of the genitals, and if there has been a rupture of the perineum should close it up with sutures at once. If any slight solutions of continuity are discovered they should be wiped with a linen cloth and then treated with persulphate of iron and carbolic acid, after which they should be again wiped with a cloth and painted with gutta-percha collodion.

(7.) In six or eight hours a warm antiseptic vaginal injection should be made, and a suppository containing from three to five grains of iodoform should be placed under the os uteri. The injection should be repeated every eight hours.

(8.) The suppositories should be repeated every two or three hours, and kept up for at least ten days.

(9.) When catheterization is necessary, a new gum elastic catheter, which has first been dipped in an antiseptic solution, should be employed.

(10.) The physician should convince himself that the nurse has the ability to use suppositories, syringe, and catheter as required.

It was clear, Dr. Thomas continued, that all this tended to increase the importance of the process of parturition, so that as the opinions became more widely accepted a woman who was about to bring forth would be regarded exactly in the light of a patient about to undergo a capital operation. Having strongly condemned the use of intra-uterine injections as a prophylactic, except after very severe operations within the uterus, when the occurrence of septicæmia was almost certain, he proceeded to call attention more particularly to the early symptoms of the disease and the necessity for prompt interference on the part of the physician. The treatment which he recommended was as follows:—

(1.) The hypodermic injection of morphia to allay nervous irritability and afford relief from pain. The injection, as a rule, to be repeated every six or eight hours. A new needle to be employed, and after use to be thoroughly washed with soap and water, and dipped in a solution of mercuric bichloride.

(2.) Intra-uterine injections of warm water containing mercuric bichloride, in the strength of one part to two thousand, by means of Chamberlain's glass tube, modified by reducing the number of waste-holes, or the metallic tube devised by Dr. George H. Lyman, of Boston. In some cases where it was supposed that portions of the placenta were retained, chloroform was to be given, and the uterus cleared out with the fingers. The dangers of the intra-uterine injections were pointed out to be, entrance of air into the uterine sinuses, hæmorrhage, the carrying of poison into the circulation through the open sinuses, pain, shock, or convulsions from the effect upon the nervous system, and peritonitis from the entrance of the fluid into the peritonæum through the Fallopian tubes. The injections were always to be administered with great care by the physician himself, the tube being passed fully up to the fundus, and it was important that neither the os internum or os externum should be so completely filled by the tube that the fluid could not find free exit. Ergot and bisulphate of iron were always to be kept at hand in case of the dislodgement of a thrombus. A number of deaths had been reported as due to intra-uterine injections, and Dr. Thomas had met with one fatal case in his own experience. In mild cases the injections were to be given every five hours and in others every three hours, while in bad cases they were required every hour. Many preferred the steady stream of the fountain syringe, but he was convinced that the interrupted stream of the Davidson or Higginson syringe was much more serviceable. Some had adopted the plan of continuous irrigation, but this he believed to be entirely inadequate, because the germicide fluid could not by this means be brought in contact with the whole endometrium. In some bad cases, however, it was well to resort to this, and then, in addition, employ the intermittent stream once in three hours.

(3.) The reduction of temperature. High temperature was one of the immediate factors of a fatal issue, and in order to control it he had formerly relied on

Kibbie's cot. Now, however, he employed Townsend's rubber coil, a mat composed of a long rubber tube coiled in circles upon itself, which was placed upon the abdomen, extending from the symphysis pubis to the ensiform cartilage, and through which a constant stream of ice water was passed. By means of this a temperature of 104° F. could be reduced to 100° F., and maintained at this point indefinitely. Some physicians had expressed the belief that it would give rise to pneumonia or pleurisy; but he had never seen any such result, and the coil was constantly in use at the Woman's Hospital after laparotomy. Its prolonged use was essential, and its removal from the body for even a single hour was sometimes quite detrimental. If hot water bottles were kept applied to the soles of the patient's feet, not the slightest bad results were to be apprehended from its employment.

(4.) The use of febrifuges such as quinine, Warburg's tincture, and salicylate of soda.

(5.) An ample milk diet, supplemented by animal broths.

(6.) Efficient and abundant assistance. It was essential that there should be both a day nurse and a night nurse, and that a physician should be in the house all the time. With simply one physician and one nurse the treatment could not be carried out successfully. If carbolic acid were employed for the intra-uterine injections a two per cent. or two and a half per cent. solution was recommended.

DR. W. M. POLK said that as regards treatment Dr. Thomas had left but little to be said. In the matter of pathology, however, he thought it would perhaps have been better if he had planted himself more squarely on the position that puerperal fever was identical with surgical pyæmia and septicæmia. This was his own opinion, and if we were to adopt the measures so forcibly set forth in the paper he believed that it was necessary to take this position. It was only in the domain of ætiology that those who opposed this view found ground for support. As regards treatment, the principles of Listerism as laid down by Lister and his followers, and advocated on the present occasion by Dr. Thomas, entirely covered the ground. He would merely add that in this city, where there was so much bad drainage, the question of pure air formed a very important one in this connection. Not infrequently the lesion giving rise to trouble was located in the cervix, and the stream of the intra-uterine injection was not sufficiently powerful to separate the agglutinated surfaces. His plan was to make a thorough inspection of the vagina and cervix by means of Sims's speculum, and, in case of any lesion being discovered, to apply a strong solution of carbolic acid or other antiseptic directly to the spot. To the interior of the uterus he sometimes applied a two per cent. solution of carbolic acid on borated cotton, if no solution of continuity were found without; and when there was reason to suspect that any part of the placenta was retained he was in the habit of using Skene's broad curette.

DR. J. B. HUNTER spoke of the difficulties in carrying out Dr. Thomas's plan of treatment, especially when the patient was in moderate circumstances. In order to cause as little disturbance as possible, he preferred to use a bed-pan in making intra-uterine injections, rather than have the patient moved to the edge of the bed, with her feet resting on chairs, as recommended in the paper. He objected to Chamberlain's tube on account of the probability of the fluids not

reaching the fundus through it, and had had a tube made about half the size of this, with orifices only at the extremity. The mouth of the uterus he had found to contract very considerably after two or three hours, and it was sometimes necessary to dilate it. Mott's double catheter, he thought, was a very good instrument to employ in making intra-uterine injections. As to the effect of the injections, he did not believe there was much danger of causing shock, but once or twice he had noticed them to be followed by a slight chill, a fact which he attributed to the water employed not being quite warm enough. He narrated one case in which septicæmia had occurred as late as the seventh week. When he was called in the patient was moribund, and the temperature ranged from 103° F. to 105° F. The physician in attendance was opposed to resorting to intra-uterine injections, but it was determined to resort to them. At first they seemed to have very little effect; but they were persevered in, and at the end of twenty-four hours the temperature was about normal. They were kept up for three days longer, and the patient recovered. In simple septicæmia he did not believe in the use of the coil, but in peritonitis, as after the operation of laparotomy, he had the strongest faith in it. The septicæmia might be of a very serious nature, and yet the temperature be comparatively low.

After a few remarks by DR. PARTRIDGE, the President, DR. BARKER, proposed, in view of the lateness of the hour, the importance of the subject, and the number who wished to speak upon it, that the first meeting in February should be set apart for the further discussion of the paper.

Recent Literature.

The Pathology, Diagnosis, and Treatment of the Diseases of Women. By GRAILLY HEWITT, M. D. Edited, with notes and additions, by HARRY MARION SIMS, M. D. New York: Bermingham & Co. 1883.

This work is the American reprint from the fourth revised and enlarged London edition. It is ten years since the last edition appeared, and the valuable experience of those years is made good use of by the author. It has in no wise shaken his well-known views of uterine pathology; on the contrary they have been strengthened, and not only does he still look upon uterine displacements as the predominant cause of uterine disease, but he alleges as the predisposing cause errors of nutrition. The experience of the last ten years has served to confirm these views, and they are very fully developed in this edition.

Grailly Hewitt's work is too well known to need any detailed criticism. This present edition has been thoroughly rewritten, and considerable new material added. A new chapter on Hysteria and one on Vomiting in Pregnancy explain both conditions in accordance with the author's well-known mechanical pathology. This is not the place to discuss the author's views at length. We would, however, say that the value of the work is to our minds impaired by the predominance he gives to displacements and distortions of the uterus as a cause of uterine disease. In his zeal he goes too far, and fails to give other factors their just weight.

The book, however, is an interesting one, full of suggestion, and well worthy careful reading. Its value is enhanced by the good work done by the American editor, who, in a series of notes incorporated in the text, has very happily supplemented some portions of the original work which were rather meagrely treated, or has quite as happily corrected certain erroneous views and statements. We cannot help wishing that the English edition might have had the benefit of these valuable notes.

The book itself, while not unexceptionable in the matter of paper, type, illustrations, and binding, is very fairly gotten out.

Insanity Considered in its Medico-Legal Relations.

By T. R. BUCKHAM, A. M., M. D. Philadelphia: J. B. Lippincott & Co. 1883.

This volume of 250 pages was written principally for the purpose of pointing out the "pernicious uncertainty of verdicts in insanity trials."

Chapter one gives a variety of definitions of insanity, of courts and various authors, and points out their lack of harmony. Chapter two descants on an original theory of the writer called the "Physical Media Theory." This theory, like the "Metaphysical Theory," regards the mind as a distinct, intangible, incorporeal entity, not dependent upon the body for its existence; . . . it recognizes the most intimate relations between mind and body, . . . and holds that the mind is *wholly dependent* for the manifestations of its operations on certain organs of the body which we designate "*physical media*." Nearly forty pages of miscellaneous quotations and discussions are taken up in elucidating this theory, which is at last established to the author's entire satisfaction and the reviewer's utter stupefaction. The chapter ends with the very wise conclusion, that "Insanity being the result of physical disease, it is a matter of fact to be determined by medical experts, not a matter of law to be decided by legal tests and maxima."

Chapter five, which is a very long one, is given up to Experts, and an appendix is devoted to the consideration of Judges' Opinions.

The style of the writer is rather too diffuse, and he wanders through a good many pastures that are anything but new, but he finds some pabulum which, if not always fresh and green, will at least do to ruminate over.

Students' Manual of Diseases of the Nose and Throat.

A Digest, descriptive of the more commonly seen Diseases of the Upper Air-tract, with the Methods of their Treatment. By J. M. W. KITCHEN, M. D., Assistant Surgeon to the Metropolitan Throat Hospital. New York: G. P. Putnam's Sons. 1883.

This elementary little book, 124 pages 16mo, is a compilation of some of the existing knowledge of the diseases of the nose and throat. It was written, the author tells us in the introduction, with the thought that it "might be of service to the over-worked student, and even be of value as a handy book for quick reference to the general practitioner." We question whether it is for the ultimate advantage of students to attempt to acquire medical knowledge by these short cuts; but if there be a demand for them, this slender volume will be found fully up to the average.

Practical Histology and Pathology. By HENRAGE GIBBES, M. D., Lecturer on Physiology and Histology in the Medical School of Westminster Hospital. Second edition. Philadelphia: P. Blakiston, Son, & Co. 1883. 154 pages.

Dr. Gibbes is well known as a preparer of histological objects, and this book bears the impress of one who has a thorough practical knowledge of the subject about which he writes. It is almost entirely devoted to the best manner of preparing specimens, and gives but brief description of the objects themselves. The first part of the book treats of the normal tissues, telling from what animal and part they are to be best obtained, preserved, and stained. The second part is largely given up to the methods of staining bacteria, especially the bacillus tuberculosis. All who are interested in such work will find many valuable suggestions on the use of aniline colors for double and treble coloring, to which the author has given much attention. The book deserves a place in the library of every advanced student of the microscope.

Manual of General Medicinal Technology, including Prescription Writing. By EDWARD CURTIS, A. M., M. D., etc. New York: William Wood & Co. 1883. Wood's Pocket Manuals. Pages viii., 234.

This pleasantly written little book is less technical and mathematical than the name (to which it is hardly large enough to be entitled) would lead us to expect, and can hardly fail to be interesting as well as profitable to the medical student who reads it.

It contains an excellent chapter upon the Forms of Medicines, preparations, etc. A good one upon the Prescribing of Medicines, and a few pages upon Quantities of Medicines, namely, weights and measures. These comprise about three fourths of the book, and are followed by Modes of Medication; The Introduction of Medicine into the Various Cavities and Tissues of the Body, and Dosage. These last chapters might profitably have been much more full.

An Ethical Symposium, being a Series of Papers Concerning Medical Ethics and Etiquette, from the Liberal Stand-point. By DRs. POST, ELY, VANDERPOEL, PILCHER, HUN, WEY, AGNEW, etc., etc. With an Appendix. New York: G. P. Putnam's Sons. 1883.

Those who desire to know what the advocates of "No-Code" in New York think, and why they think it, will wish to read this book.

The Treatment of Wounds as Based on Evolutionary Laws. By C. PITFIELD MITCHELL. New York: J. H. Vail & Co. 1883.

In this little treatise is set forth, in a strained imitation of philosophical language, the idea that by the law of evolution the tissues when healthy must of necessity be adapted to safe and speedy healing in normal surroundings of air, etc. The author advocates the use of dry dressings. He regards the use of antiseptics as meddlesome interference with nature. Verily the closest naturalist still lives.

Medical and Surgical Journal.

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INSANITY AND MURDER. TWO TRIALS.**THE CASE OF FREEMAN, THE INSANE KILLER OF HIS CHILD.**

On the first day of May last Charles F. Freeman was brought before Judge Colburn, of the Supreme Court, on motion of his counsel, for his release from the Danvers Lunatic Hospital, where he had been for a little over three years. Although indicted by the Grand Jury for the murder of his daughter, May 1, 1879, under the influence of the delusion that, like Abraham, he had been commanded by the Lord to sacrifice his beloved child, he was declared by the Court unable to plead understandingly by reason of insanity, and sent to the insane asylum to await the further orders of the court. The progress of his cure was well described by Dr. W. B. Goldsmith, medical superintendent of the hospital, who testified that when he first went as superintendent to Danvers, in March, 1881, and met Freeman, the latter was physically without any peculiarity. He was quite composed, but he had at that time insane delusions of a religious type. He believed even then that he was specially favored by the Lord, from whom he had had a direct revelation. He regarded himself as the Christ of his age, and regarded his appearance at this epoch as an important event in religious history, and in fulfillment of a prophecy. He had no remorse whatever for his act, but sometimes doubted whether he had not been inspired by the devil instead of by a beneficent Deity. Later on he began to doubt whether he was really insane or the victim of demoniacal possession. About a year ago he came to the conclusion, especially after watching his fellow-patients, that he was, or had been, insane. Gradually all his delusions left him and he became quite convalescent. At no time since last summer would witness have signed a certificate that he was insane. For ten months he had had full liberty of the hospital grounds on parole. There was no need to watch him as an insane man, for he was now fully recovered. To say whether there was any danger of a relapse would be purely guess-work. Apparently there was not, but he was now of the same mental constitution which had previously predisposed him to insanity. Witness did not believe there was any reasonable danger in allowing him to go free. In reply to Attorney-General Sherman the witness said that persons in a state of delusion often accepted

dreams as divine revelations. Freeman was always sorry for the act. He was sorry when he was insane, but then he regarded it as a necessity. When he recovered he did not feel responsible for the act, as he knew that he was insane at the time. In that sense he felt no remorse, but only sorrow. Freeman had informed witness that he had entirely changed his religious views. The last thing he would do would be to return to Pocasset and mix with his old associates in the religious excitement.

Dr. Gorton, assistant physician at the asylum, and Dr. C. F. Folsom testified to essentially the same opinion. Dr. Park, superintendent of the Worcester Lunatic Hospital, and Medical Examiner Munsell gave evidence that they considered Freeman no longer insane. Judge Colburn said that there was no doubt of the fact that Freeman had recovered; but he did not think that he had any power to release him upon his own recognizance, as desired by his counsel, or upon bail, as agreed to by the Attorney-General. Freeman was thereupon remanded to jail.

December 5th Freeman was brought to trial before a jury. After a few witnesses' testimony to the fact of the homicide, Dr. C. F. Folsom, Dr. J. P. Brown, medical superintendent of the Taunton Lunatic Hospital, Dr. J. H. Denny, Dr. Peter Pineo, and Medical Examiner Munsell, testified that Freeman was then, in their opinion, insane. The question of his present mental condition was not touched upon. The verdict of "not guilty by reason of insanity" was brought in by the jury, and Chief Justice Morton sent him to the Danvers Lunatic Hospital for life, in accordance with the Massachusetts law of 1873, that, whenever a person is found not guilty of homicide by reason of insanity, the jury shall so state in their verdict, and the judge shall commit the prisoner for life to an insane asylum, from which he can be discharged only by death or by pardon at the hands of the Governor and Council.

There are now, beside Freeman, three persons in our asylums for life, found not guilty of homicide by reason of insanity, — a man who killed his wife under the influence of the delusion that she was plotting to kill him, and while far enough advanced in his disease to have become slightly demented; the boy who killed his comrade in Somerville, in whom the evidence of insanity was somewhat obscure; and a young woman who drowned, and perhaps also strangled, her illegitimate child. Probably all persons familiar with criminals and with mental disease, after making a personal examination of these three individuals, would agree that it is not now safe, and that it probably never will be safe, to discharge either one, unless many years hence when dementia may have supervened.

In Freeman's case Drs. Goldsmith, Gorton, and Folsom have stated their conviction that there is not much probability of a relapse or a recurrent attack, and that they see no unreasonable risk to society from the chance of his being again insane and committing another crime.

Dr. Goldsmith, however, it must be borne in mind,

had previously stated that it would be purely guess-work to say whether there was any danger of a relapse; and in such a case as Freeman's we are not disposed to dissent from such a statement, but rather to approve it, and to remember "that he has still the same mental constitution which previously pre-disposed him to insanity."

We do not understand that the medical experts have expressed any opinion as to the effect on other persons disposed to commit crime of pardoning or refusing to pardon Freeman. Indeed that is rather a question for the officers of the law than for the doctors. But, if we expect society to respect the opinions of special students of mental disease and to be guided by them in its treatment of insane criminals, the utmost caution and solemnity should attach to a verdict of "not guilty by reason of insanity," and to a judgment of commitment for life to an asylum. The pardoning power should intervene with at least as little indiscretion as is now shown toward the ordinary criminal.

We have lately called attention editorially to what we termed "judicial murders" in England, the following account exhibits, on the part of the defense, if we may trust the report of the trial therein given, the possible dangers of opposite tendencies, and the case of Montgomery is opportune in contrast to that of Freeman.

THE CASE OF MONTGOMERY, THE MURDERER OF HIS CHILD.

Since the memorable Andrews trial, in which the sentence to the State Prison for life was, in our opinion, properly passed, there has not been, so far as we can recollect, a single case of the plea of temporary insanity or transitory mania having been entered for a murderer in this State until last week, at Northampton, in behalf of Montgomery, who killed his child December 26, 1882, at the house of his father-in-law, Mr. Marsh.

Montgomery had been married for about seven years, and had two children, Eva and George. He had not lived with his wife for some time, but he came to Pelham early in November with Constable Burnett, and demanded his children, saying that he had heard that his wife was living with Irving Carry and other men. This was emphatically denied, and the father-in-law told him that he could not take the children unless it was over his dead body. At that time Montgomery seemed very much excited, and put his hand upon his hip-pocket. Mr. Marsh told him to draw his pistol if he wanted to, but Mrs. Marsh interfered and pacified the men, and it was agreed that the matter should be dropped. Montgomery stayed two or three days, and came again just before Christmas, bringing presents to his wife and children. Tuesday morning he tried to prevail upon his wife to go and live with him again, and, on her refusal, he went to his overcoat, hanging on the wall, and, muttering "All right," stepped to the outer door where his little boy was playing on the sled. Another boy called, "Georgie," but he said, "I want to kiss papa first," and just then the father fired the fatal shot. Then he ran into the house, and was caught by Mr. Marsh. Mrs. Marsh got the clothes-line to tie him up with. When this was done Montgomery cried out, "Oh God, forgive me for what I have done," and again, in a few minutes, when charged with his crime, he said, "God knows I haven't killed my boy, and if I have I don't know it." He only wounded the other child, and was quite unsuccessful in his attempt to kill his wife. At one time Montgomery had trouble with Mr. Marsh, and drew a knife on him. He loved his children, and he very rarely punished either of them. Mrs. Marsh spoke of her daughter's intimacy with Irving Carry, acknowledging that she had seen her sit in his lap, and occasionally had noticed him put his arm around her, but had "never noticed anything improper."

Montgomery's wife said that the trouble between herself and husband grew out of a disagreement about going to work. He wanted her to work in the Ludlow mills to aid in supporting the family, but she refused. Lack of support was the cause of her desertion from her husband. She confessed that she deceived him with letters, and that she stole twenty dollars from Carry's trunk when she went off, and admitted that on the morning of the murder Carry was in her bed, as he was not feeling well. She acknowledged various intimacies with Carry, but denied anything criminal.

On the way to jail Montgomery muttered, "That damned Carry is the cause of all this," and he also said, "God knows I would n't shoot my little children." Before the shooting he complained of his head feeling bad, slept but little, and "did not eat as a man should who was at work chopping." He spoke frequently of his family, and seemed to think much of his children. At one time he said, "I should rather my children should be in the grave than for them to have another father to rule over them." Sometimes when at work he would drop his head, and seemed to be troubled about something.

Montgomery testified that the day before the fatal shot he could eat nothing, and did not sleep that night. Tuesday morning he remembered dressing the children, and going out for a little, and then returning to the house. He was sitting with his wife, and was talking with her about living with him, and the last he remembered was hearing his wife say, "It's no use talking, Meunie, I shall not live with you again," until he found himself bound in the same room. His wife soon came in and swore at him, saying that he had killed his children, which he denied, as he did not know or would not believe that he had killed his little boy. When he came to himself he had a prickling and numb sensation over his body. He did not know just when, if ever, he had any jealousy of his wife on account of her actions with Carry, but he felt terribly worried at his wife's actions and intimacies with Carry. He bought the pistol with the idea of going West after getting his children.

Dr. Giffillan, jail physician, said that the prisoner had complained of dizziness in the head and want of appetite. When listless the pupils of his eyes would dilate to again contract when he became interested on any subject. Dr. A. W. Thompson, of the Shady Lawn Retreat, said he had visited him at the jail, and found him with a weak voice and a troubled expression about his face. He is apparently a man of weak and varied nature. There is a condition of mind known as transitory mania, though only a few cases are known. Dr. Nims, of the State Hospital, had noticed that Montgomery appeared to be in a listless condition, and that he complained of a pain in his head. Assuming all his testimony to be true we are obliged to decide that he was insane. While the witness had treated over 3500 insane patients, he had never had any personal knowledge of transitory insanity. Dr. Earle, superintendent of the State Asylum, was confident, eliminating all testimony but that of Montgomery, that he was in that condition called insanity at the time of the shooting.

Judge Bassett made a strong plea for Montgomery, in which he said that by the medical testimony he is seen to be like an automaton or a machine without a concurrent mind. Attorney-General Sherman claimed that the act was purely a criminal one, although with some provocation, and protested against the idea that the prisoner was insane one moment and sane the next. The jury rendered a verdict of guilty of murder in the second degree, and the prisoner was sentenced to the State Prison for life. Judge Allen, in dismissing the jury, said that the verdict was in accord with his judgment and that of his associates, and, we may add, with ours.

THE INDEX MEDICUS AGAIN.

FOR the last two years we have called our readers' attention with each recurring close of the year to the propriety and necessity of supporting the *Index Medicus*. Lest any one should plead ignorance, we will say that it is a monthly periodical which gives a list of medical books published during the preceding

month, and also a list of journal articles in all the principal medical journals of the world, classified by subjects. Every man who takes an interest in any particular subject sees at a glance what has been published on that subject, every man who is interested in the welfare of his profession, and believes that welfare is increased by the free interchange of ideas, every man who uses medical libraries, or desires that those who do use them should have an opportunity to use them to the best advantage, should be interested in the existence of the *Index Medicus*.

There is no question as to the value of the publication and the desirability of continuing it, but its use is mostly restricted to the frequenters of libraries, and a single copy in the library, with occasional subscriptions by bibliomaniacs and specialists, supplies the actual wants of the community.

It has been sustained heretofore, in answer to the appeals of its publishers, by contributions from private individuals and societies. Many individuals contributed gladly, or subscribed for extra copies for which they had no possible use, in hopes that its legitimate subscription list would increase sufficiently to insure its continued existence, but the publishers are again obliged to make a statement, which this year is to the effect that there are scarcely six hundred subscribers to whom the *Index* seems to be a necessity, and publisher and editor are agreed that the enterprise must no longer be dependent on voluntary contributions, but must either be abandoned or be placed on the business footing of an equally shared support.

A certain portion of the support of the *Index* has been drawn from various societies, and this suggests the source whence its future support ought to come. Where could our various State societies find an object more worthy their fostering care, or one which would better repay the outlay? A division of the deficit, after a reasonable subscription price by actual subscribers, among the various State societies would unite them in sustaining a work of professional and national pride, and would secure the perpetuation of a work which has become a necessity to the students and writers of the profession.

MEDICAL NOTES.

NEW YORK.

— The forty-first annual meeting of the Society for the Relief of Widows and Orphans of Medical Men was held November 28th at the hall of the Academy of Medicine. Dr. Isaac E. Taylor was reelected president, and Dr. John H. Hinton secretary and treasurer. Seven members of the board of twenty-one managers were also elected to serve three years. The membership now numbers 140, of whom ninety-two are life members, and forty-two annual subscribers. The number of benefactors living is twenty, any one being entitled to this designation who contributes \$150 or more to the funds of the Society. Some of the deceased benefactors have left considerable bequests to the organization, and its total assets on the

19th of September last amounted in value to \$143,447.93. Aid was extended during the past year to thirteen widows and four children of deceased members, and the amount disbursed for this purpose was \$4,251.50. Every widow of a member having an income on property of less than \$800 a year is entitled to assistance from the Society, the annual stipend allowed varying according to the exigencies of the case. Those who are entirely destitute are insured an income of \$400, and destitute children also receive annuities.

— It has been decided that the reports recently made by the Sanitary Inspectors in regard to the condition of the public schools are to be carefully examined by a joint committee from the Board of Health and Board of Education, and needed changes are to be made in those buildings which demand immediate attention. For this purpose the Board of Education has appropriated the sum of \$6000, although it was estimated that the changes needed to correct the insufficient ventilation, bad drainage, and defective plumbing of the schools would cost \$60,000. Still this is better than nothing, and something will, no doubt, be accomplished in the way of improvement. It is said that the President of the Board of Education refused to give the reports of the Sanitary Inspectors to the public because their publication "would depopulate the schools."

— At a meeting of the Medico-Legal Society held December 5th Dr. J. G. Johnson, of Brooklyn, read a paper on Railway Injuries to the Spine, after which the annual election of officers took place. Mr. Clark Bell was elected President; Dr. R. Ogden Doremus, first Vice-President; Mr. Delano C. Calvin, second Vice-President; Mr. Leicester Holme, Secretary; Mr. A. S. Hammersley, Treasurer; Dr. Andrew A. Smith, Curator and Pathologist; and Dr. Charles A. Doremus, Chemist. Dr. William A. Hammond was the opposition candidate for President.

— The investigation of the recent outbreak of diphtheria in the Blind Asylum at Batavia by the State Board of Health showed that the interior sanitary arrangements of the building were very defective, and that the large drain which conducted the sewage to a swamp back of the institution, and which was of concrete, had fallen to pieces, while the earth had caved in and blocked up the passage. The asylum will remain closed until the improvements now in progress under the direction of the Board have been completed.

— There is now living at Penn Yan an individual who for two years has had a bullet imbedded in his brain. In the autumn of 1881 he was shot over the left eye by a drunken companion, and although at first a fatal result was naturally anticipated, in a few months he entirely recovered. The accident is said to have occasioned a complete change in the character of the man, who, previously dissolute, morose, and quarrelsome, has now become a peaceable, sober, and industrious citizen.

— The new hospital for contagious diseases on North Brother Island, East River, is to be supplied

with water from the main land by a pipe 2200 feet in length, which is said to be the longest water-supply pipe ever laid in the bed of any river in this country. By means of it 1,000,000 gallons of Croton water can be furnished to the hospital a day under ordinary pressure.

—The annual meeting and election of the State Charities Aid Association was held December 13th. The Secretary's report embraced the history of the work of forty-four local visiting committees in addition to that of the standing committees and the New York County Visiting Committee with its subdivisions. The subject of the treatment of the insane in poor-houses and in the county asylums was treated at length, and descriptions were given of these institutions in different counties, which exhibited a very unsatisfactory condition of affairs from a moral as well as a hygienic point of view. According to the published report insane patients who might, perhaps, be cured or improved with proper care in State hospitals were found cooped up in close cells like ox stalls, as in Chenango County, or chained like wild animals to strong iron rings in the wall of the yard, as in Genesee County, the lack of suitable attendants making this recourse to restraint necessary. In Broome County the bath-room was found in the coal cellar, and six patients were required to bathe in the same water, which was then saved to wash clothes in the laundry. In Niagara County the insane patients were found shoeless and bare-headed, compelled to sit on the floor, and all, both men and women, under charge of a male pauper. As a general rule the insane in county poor-houses were kept in attics, basements, and out-buildings, which were filthy and squalid. The poor-house buildings in Tioga County in particular were described as old and unsuitable, with a marked lack of bathing conveniences and hospital accommodation. In those of Chenango County were found many distressing cases of suffering and misery, and the institution was described as containing a larger number of mentally and physically diseased inmates than any other in the State. In Fulton County men and women, sick and well, sane and insane, were herded together like cattle, and the sanitary condition of the poor-house buildings in Genesee County was found to be particularly bad. As these various local institutions seemed calculated rather for the encouragement of insanity and misery than for their suppression, the report recommended that poor-house insane wards and county asylums should be abolished, and that all classes of the insane poor should be cared for by the State in cottages of moderate cost erected on the vacant lands of the present six State institutions for the insane. The report also recommended the opening of training-schools for nurses in insane hospitals. Since publication the Secretary of the Association has made the following corrections in the report of the annual meeting of the Society: There are now no insane in the poor-house of Niagara County, all having been removed to State asylums. In Genesee County the statement that lunatics were found chained to the wall is a mistake. In Chenango County there was found a want of proper classification; but the in-

sane are cared for in an asylum adjoining the other buildings.

—In his annual report to Mayor Low, Dr. Raymond, the Health Commissioner of Brooklyn, states that the health of the city has been better during the past year than in any other since 1879. The total number of deaths in the twelve months ending November 30, 1883, was 13,833, or 1180 less than the actual mortality during the calendar year 1882. Estimating the population at 624,118, the death-rate is 22.16 in each thousand inhabitants. In the course of his report Dr. Raymond says: "I am impelled to state my conviction that the efficient operations of the Department of City Works have vastly improved our sewer system, and for some months, at least, have given us pure air to breathe by giving us relatively cleaner streets under the new contract, and have thus indirectly come to the aid of the sanitary authority in its fight against zymotic disease." Attention is then called to the great need for new sewers in the outer wards, which are now being rapidly built up, and the report also recommends that all slaughter-houses shall be removed from the crowded portions of the city.

—The committee of the State Board of Health on Drainage, Sewerage, and Topography have made an investigation of the causes of malaria at Rhinebeck and other places along the Hudson River, and have recommended the construction of suitable culverts through the embankments of the Hudson River and the Hartford and Connecticut Western Railroads, which cut off from the main channel of the river a long narrow cove half a mile north of the station at Rhinebeck. It is the opinion of the Board that the malaria reported at other points along the Hudson is due to similar causes; the railroad embankments preventing the proper flow of the water in and out of the coves thus formed.

—An operation for the removal of a cancer of the breast in a patient at Glenville, New York, recently resulted in erysipelas and tetanus, and the case terminated fatally on the 23d.

—The election at the Society of Medical Jurisprudence and State Medicine was held on the 13th, and resulted as follows: President, Mr. William Barnes; Vice-President, Dr. E. J. Birmingham; Secretary Dr. N. E. Brill; and Treasurer, Dr. E. C. Harwood.

Correspondence.

LETTER FROM ST. PETERSBURG.

ST. PETERSBURG, December 1, 1883.

MR. EDITOR,—In response to your request that I should send you a letter from Europe, in case I should learn of anything interesting to the medical profession in our own country, I take pleasure in forwarding to you the following synopsis of an important practical discovery of a Finnish physician, which will be of great importance to every physician, and the details of which I doubt whether you may receive for some time, because the discovery is only recently given to the medical public.

At a meeting of the Medical Society of Finland of the 10th of November, Dr. Qvist made a communica-

tion concerning a new method for propagating the peculiar bacteria upon whose vitality in vaccine virus the efficacy of its contagion depends. It is not necessary to describe this form of bacteria, since they are well known to microscopists. To propagate these bacteria outside of the animal two conditions are essential:—

(1.) An exposure to common atmospheric air, upon the carbonic acid of which these microzoa live.

(2.) A suitable culture material.

The description of an apparatus which embodies these conditions is not complicated; but unless there is present carbonic acid gas, no development of the vaccine organism can exist. The development of these organisms subsides more readily in every capillary tube which is quite full of vaccine lymph, thus allowing no air space, and especially if these tubes are hermetically sealed; while on the contrary, tubes whose calibre is of a certain size, and which are open, favor their development. Dr. Qvist's experiments proved to him conclusively that these organisms pass through a decided development in open tubes partially filled with vaccine lymph, but that it is not of the same character, in most instances, with that which occurs in the animal body.

A vaccine bacterium is a veritable *aërobium*. In the lymph spaces of the skin there is undoubtedly a sufficient quantity of air containing carbonic acid gas, but this condition can be more readily controlled outside of the body. It is only necessary to have a porous substance, like the meshes of a common sponge, which shall have the property of imbibing a liquid, whose character will form a convenient vehicle for the cultivation of the vaccine bacteria, but a watch glass answers this purpose even better, because the liquid vehicle placed in it may have its upper surface more thoroughly exposed to the active influence of common air.

Dr. Qvist has used for this culture fluid egg albumen, which is better than the more solid forms of albumen. Egg albumen has properties which are in many respects similar to the serum of the blood. Yet it is not improbable that the mineral portions of egg albumen combined with ammonia and some organic oxide may serve equally well for a propagating medium, though this remains for further investigation. He prefers to use glycerine with egg albumen, not because it forms an important ingredient of the culture fluid, but because without its presence the albumen is liable to a partial desiccation which prevents the cultivation or propagation. Vaccine bacteria require during their development a larger proportion of glycerine than other micro-organisms, especially those of the fungus character, such as may grow upon old leather, for the following reasons: mould fungi may possibly destroy or prevent the growth of vaccine bacteria; hence as the former require less glycerine, and are really destroyed by too much of it, the latter may exist more favorably in a vehicle containing rather more glycerine than is ordinarily used in the cultivation of these mould fungi. Therefore this condition of their vitality is an important matter. Mould fungi also live by preference in a liquid vehicle which has an acid reaction; while, per contra, vaccine bacteria like their congeners exist by preference in a vehicle of an alkaline reaction.

The following list of culture fluids used by Dr. Qvist does not presuppose that there are not others possessed of equal value for the propagation of vaccine bacteria, and he recommends as those which experience has

shown him to fulfill all necessary conditions the first four named:—

No. 1.	Bovine blood serum	1 part.
	Glycerine	1 part.
	Distilled water	1 part.
	Calcic carbonate	1-800 part.
No. 2.	Bovine blood serum	2 parts.
	Glycerine	1 part.
	Distilled water	2 parts.
	Calcic carbonate	1-400 part.
No. 3.	Egg albumen	1 part.
	Glycerine	1 part.
	Decoct. althææ radicis	1 part.
	Calcic carbonate	1-150 part.
No. 4.	Egg albumen	1 part.
	Mucilag. gum acaciæ	6 parts.
	Calcic carbonate	1-60 part.
No. 5.	Tartrate of ammonia	1 part.
	Phosphate of calcium	1-10 part.
	Carbonate of calcium	1-5 part.
	Sulphate of magnesium	1-50 part.
	Chloride of calcium (vel calcium chlorum)	1-100 part.
	Distilled water	100 parts.
	Glycerine	30 parts.

The following means should be used to destroy the organisms which are peculiar to the culture fluid itself. It should be subjected to a constant temperature of 60° C. for one and a half hours continuously on three successive days. Dr. Qvist has proved this means of sterilizing the culture fluid by frequent microscopical examinations of it after the above process, and has not found the development of any organisms even in a specimen kept for three months. All the other ingredients used in the culture fluid have either been subjected to a similar sterilizing process or have been used immediately after being warmed or heated.

As he found that the usual summer heat or that of a warmed house in winter, at 19° C. to 20° C., has favored the propagation of these bacteria, he has not experimented with any other variations of temperature.

As seed for transplantation of vaccine bacteria he has used vaccine lymph just ripe or a little old, and which has been found by experimentation to be capable of producing a true vaccine pustule. Then a piece of dry sponge, completely sterilized by the above process, is allowed to imbibe a little of this selected vaccine lymph, and is immediately transferred in a culture fluid placed in a watch glass.

But a more convenient and safe method is accomplished by taking a piece of the epidermis from a true vaccine pustule, but taking pains not to allow any of the blood serum to be attached to it, because the epidermis itself is sufficiently saturated with pure vaccine lymph. To do this successfully a small portion of the epidermis should be taken from a vaccine vesicle on the eighth to the tenth day according to the character of its development, by gently lifting and separating it from the whole vesicle, then cleaning it by washing, and then after one or two days' careful drying it should be immediately placed in the culture fluid. This solid mass of seed, if not injured by outward circumstances, has always proved efficacious.

The watch glass should be three or four centimetres in diameter, and is the most convenient vessel for use when it is desired to propagate rapidly the vaccine virus in a dilute form. The watch glass should be placed on a table or shelf and exposed to moist air and covered by a cleaned tumbler.

When it is desired to produce a concentrated form

of virus a test tube is preferable, and it should be corked with a paraffine coated cork, taking care to sterilize the paraffine, and to allow a small air-hole on the side of the cork.

If the surface of the culture fluid be examined even in a day or two, it will become turbid, and in the course of a week or ten days scales will form over its upper surface in a series of floating islets, and a fine powder will fall down to the bottom of the glass. This powder, which is also attached to the scales, contains the bacteria. At first the culture fluid is turbid, but gradually it assumes a yellow or straw color, and these physical appearances are increased by obliquely reflected light.

Vaccine lymph thus artificially prepared can be preserved in capillary glass tubes and used as required.

Dr. Qvist then cited several cases in which he proved by inoculation that his artificially prepared lymph produced pure vaccine vesicles. I will not weary your readers with the details, but trust that his experiments will be verified by some of our countrymen.

Very truly yours, ROBERT AMORY.

"A CASE OF DELAYED PUTREFACTION."

NEW BEDFORD, December 1, 1883.

MR. EDITOR,—In an article entitled *A Case of Delayed Putrefaction*, by W. H. Taylor, M. D., Medical Examiner, published in the *JOURNAL* for November 15, 1883, the following statement is made: "Her attendants were of the homœopathic persuasion, and I am unable to obtain a coherent history from them. The consulting physician made some vague remarks about 'trouble with the pneumogastric,' from which I inferred that the respiration showed some abnormal qualities. He was, moreover, strongly of the opinion that the deceased had been poisoned, and named gelsemium as the agent employed. She had no marked dyspnoea, no marked pulse change, no vomiting, pain, or diarrhoea, and passed a good quantity of urine in which no albumen had been discovered. The information derived from the attendants was sufficiently vague and inconclusive."

As the consulting physician here alluded to, I "rise to explain." So far as I am concerned, the only reason for the failure of the examiner to obtain information from me was that he did not ask for it. It was only after the so-called autopsy was made, and after the viscera had been sent to the chemist with its accompanying misinformation, that I learned that any examination had been thought of. The "vague" remarks that he attributes to me were in response to a "vague" question put to me at a chance interview, and appear, by his statement, to have been almost wholly misunderstood.

For example, I was *not* "strongly of the opinion that the deceased had been poisoned;" nor was my mention of gelsemium more than a suggestion that, instead of skull-cap, she had possibly got gelsemium by mistake.

The remaining symptoms given by Dr. Taylor, and for which I am in no wise responsible, are at fault in nearly every particular. There *was* vomiting, dyspnoea, pain, and diarrhoea.

Considering the importance of the case to the friends of the dead and to the welfare of the living, upon whom suspicion rested, I submit that the imperfect manner

in which this examination was conducted, the neglect in obtaining proper information of the ante-mortem condition,—an autopsy by the "sole light" of a "feeble petroleum lantern,"—with no "conveniences for testing the valves of the heart," etc., go far to show the unfitness of Dr. Taylor for the extremely responsible position he occupies.

HENRY B. CLARKE, M. D.

"EPIDEMIC APPROPRIATION," MARINE HOSPITAL SERVICE.

NEW YORK, December 7, 1883.

MR. EDITOR,—In the *JOURNAL* for December 6th I notice, in your review of the report of the United States Marine Hospital Service, the following statement: "The entire expenses on account of the epidemic appropriation for the two years, up to June 30, 1883, was \$54,678.10." While this statement is strictly true, it gives the reader a false impression. The fiscal year ends on the 30th of June. At that date, therefore, the account of 1882 is rendered, and the appropriation ceases to apply. On the 1st of July the appropriation of 1883 becomes available, while that which remains unexpended of the appropriation of 1882 is turned into the Treasury. The truth is that of the \$100,000 "epidemic appropriation" for the fiscal year ending June 30, 1883, the Marine Hospital Service expended \$54,678.10. How much it has expended of the \$100,000 "epidemic appropriation" for the fiscal year ending June 30, 1884, we shall not know until a year hence.

Yours, N****.

Miscellany.

OBITUARY. CALVIN ELLIS, M. D.

DR. CALVIN ELLIS, who died at his residence in Boston last Friday, December 14th, was born in Boston, at the corner of McLean and Chambers Streets, in 1826, being, therefore, at the time of his death fifty-seven years old. He was the son of Luther Ellis, a prominent iron merchant. Dr. Ellis received his early education in the Chauncy Hall school, entered Harvard College in 1842, and graduated in 1846. After leaving college he entered the medical school, from which he took his diploma in 1849, serving then a year in the Massachusetts General Hospital as house physician, and spending two years abroad in study before beginning the practice of medicine in this city. He was appointed Professor of Clinical Medicine in the Harvard Medical School and visiting physician at the General Hospital in 1864, succeeding Dr. H. I. Bowditch in both offices. He was a member of the Massachusetts Medical Society since 1850, of a number of medical societies, and was a Fellow of the American Academy of Arts and Sciences. He contributed several valuable papers to the pages of this journal, and at the time of his death was engaged upon a book upon Symptomatology, which he leaves unfinished.

The origin of the malady, duodenal ulcer, which brought Dr. Ellis's active and useful career to a premature close, probably dates back at least ten years. In 1874, when returning from one of several visits to Vienna, he experienced a good deal of abdominal dis-

tress, attributed at the time to the disturbance of the sea voyage. For the last three or four years little doubt has been entertained of the diagnosis of ulcer of the duodenum. They have been years of much suffering, well borne, in which the discharge of professional duties as a teacher and practitioner has been greatly interfered with, and latterly rendered impossible.

The end came in the usual way, by perforation of the intestine and general peritonitis.

This is hardly the time or place to speak of Dr. Ellis's merits as a teacher and practitioner of medicine. Justice will undoubtedly be done to them later. His whole heart was in his work, and he was in all he undertook a most painstaking and conscientious laborer, never sparing himself. The interest he took in the discharge of his political duties as a citizen should be an example to younger men, and one of the last marks of interest in our profession was the excellent card catalogue of the Boston Medical Library Association, which is due entirely to his thoughtful generosity. He was never married, and leaves a sister as the surviving member of the immediate family.

OBITUARY. FRIEND DRAKE LORD, M. D.

FRIEND DRAKE LORD, M. D., died on the 8th inst., at Newton Lower Falls, Mass.

Dr. Lord was born in Limington, Me., March 8, 1822, and was graduated in medicine at Bowdoin, Me., 1847. Immediately after, he visited New York and Philadelphia to perfect himself in his profession by study and observation in the hospitals of those cities. After several months he returned to his native State to engage in practice, but soon after came to this State, residing for a short time in West Dedham. He then went to Sterling, where he practiced for eight years. Fourteen years ago he removed to Newton Lower Falls, where he has since been engaged in the arduous duties of his profession. A few years ago he lost, by a sudden and painful illness, his only son, a young man of superior abilities, of unusual promise, and at the time an undergraduate at Harvard University. He began to fail in health soon after, but continued to perform his labors at the bedside till three weeks ago, when he was violently thrown against a tree, which aggravated the diseases already existing, and caused his death on the 8th inst.

As a man he was upright, retiring in his disposition, but genial. As a physician he was painstaking, careful, and sympathetic, winning the confidence and love of the several communities in which he resided. An unusually large circle of professional friends and patients extends its sympathy to his widow and daughter in their bereavement. I. H. HAZELTON, M. D.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 8, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	572	207	61.50	82.50	2.25	29.25	7.50
Philadelphia.....	846,984	340	115	19.14	14.21	2.61	10.73	3.48
Brooklyn.....	566,689	249	87	19.60	20.00	.40	6.00	4.00
Chicago.....	503,304	190	90	23.85	5.83	9.54	9.01	2.65
Boston.....	362,535	169	53	20.65	18.88	1.77	6.85	1.77
St. Louis.....	350,522	137	55	26.28	14.60	1.46	12.41	4.38
Baltimore.....	332,190	161	71	22.32	16.74	.62	9.92	2.48
Cincinnati.....	255,708	100	27	36.00	27.00	—	16.00	4.00
New Orleans.....	216,140	141	37	18.46	11.36	.73	1.40	—
District of Columbia.....	177,638	98	—	21.42	10.20	2.04	2.04	2.04
Pittsburg..... (1883)	175,000	49	17	22.44	12.24	6.12	12.24	2.04
Buffalo.....	155,137	47	22	31.95	10.65	2.13	21.28	—
Milwaukee.....	115,578	37	16	21.60	8.10	2.70	2.70	—
Providence..... (1883)	116,755	30	9	23.33	16.66	10.00	—	6.66
New Haven..... (1883)	73,000	23	4	17.40	13.05	8.90	4.35	4.35
Charleston.....	49,999	31	15	12.92	16.15	3.23	6.46	—
Nashville.....	43,461	28	8	7.14	7.14	7.14	—	—
Lowell.....	59,485	24	10	20.80	16.64	4.16	12.48	—
Worcester.....	58,295	14	4	21.42	14.28	—	14.28	7.14
Cambridge.....	52,740	21	6	4.76	14.28	4.76	—	—
Fall River.....	49,006	20	5	15.00	15.00	—	10.00	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	17	6	11.76	23.52	—	11.76	—
Springfield.....	33,340	11	1	36.36	9.09	18.18	9.09	—
Salem.....	27,598	14	4	—	21.42	—	—	—
New Bedford.....	26,875	7	2	28.42	—	—	28.42	—
Somerville.....	24,985	17	5	29.40	—	—	17.64	—
Holyoke.....	21,851	—	—	—	—	—	—	—
Chelsea.....	21,785	—	—	—	—	—	—	—
Taunton.....	21,213	8	3	—	37.50	—	—	—
Gloucester.....	19,329	—	—	—	—	—	—	—
Haverhill.....	18,475	—	—	—	—	—	—	—
Newton.....	16,995	2	0	50.00	—	—	—	50.00
Brockton.....	13,608	6	4	—	16.66	—	—	—
Newburyport.....	13,537	7	2	—	14.28	—	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Malden.....	12,017	—	—	—	—	—	—	—
Fifty-two Massachusetts towns.....	228,354	81	13	—	—	—	—	—

Deaths reported 2651 : under five years of age, 888 : principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 484, consumption 396, lung diseases 301, diphtheria and croup 196, scarlet fever 62, typhoid fever 60, diarrhoeal diseases 46, measles 35, whooping-cough 25, malarial fevers 22, cerebro-spinal meningitis 18, erysipelas 12, small-pox four, puerperal fever four. From *diarrhoeal diseases*, New Orleans 13, New York nine, Boston six, Brooklyn and Cincinnati four each, Baltimore three, Buffalo two, St. Louis, District of Columbia, Milwaukee, New Haven, and Lowell one each. From *measles*, District of Columbia 10, New York six, Brooklyn five, Baltimore four, Philadelphia and Boston three each, Chicago two, Pittsburg and Providence one each. From *whooping-cough*, Baltimore seven, Brooklyn five, District of Columbia four, New York and Boston three each, Philadelphia, New Orleans, and Buffalo one each. From *malarial fevers*, St. Louis and New Orleans six each, Brooklyn four, New York three, Chicago two. From *cerebro-spinal meningitis*, New York six, Philadelphia, Cincinnati, Somerville, and St. Louis two each, Chicago, Baltimore, Providence, and Fall River one each. From *erysipelas*, Brooklyn five, New York two, Philadelphia, Boston, Cincinnati, Buffalo, and Springfield one each. From *small-pox*, New Orleans three, Philadelphia one. From *puerperal fever*, St. Louis two, New York and Boston one each.

Five cases of small-pox were reported in St. Louis ; scarlet fever 65, diphtheria 48, and typhoid fever 26 in Boston ; scarlet fever 18, and diphtheria 40 in Milwaukee.

In the 67 cities and towns of Massachusetts, with an esti-

mated population of 1,131,434 (estimated population of the State 1,922,530), the total death-rate for the week was 19.52 against 16.56 and 18.59 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending November 24th, the death-rate was 22.7. Deaths reported 3748 : acute diseases of the respiratory organs (London) 445, scarlet fever 118, measles 96, fever 70, whooping-cough 63, diarrhoea 53, diphtheria 34, small-pox (Sunderland four, London, Wolverhampton, and Liverpool one each) seven. The death-rates ranged from 15.2 in Derby to 31.7 in Manchester ; Birmingham 20.4 ; Leicester 20.5 ; London 22 ; Nottingham 22.2 ; Birkenhead 23.5, Liverpool 24.1 ; Leeds 24.8 ; Sheffield 25.3. In Edinburgh 25.4 ; Glasgow 29.2 ; Dublin 33.

For the week ending November 17th, in the Swiss towns, there were 23 deaths from consumption, lung diseases 19, diarrhoeal diseases six, typhoid fever five, whooping-cough four, diphtheria and croup three, measles one. The death-rates were, at Geneva 13.3 ; Zurich 20 ; Basle 9.5 ; Berne 19.2.

For the week ending November 24th, in the Swiss towns, there were 26 deaths from consumption, lung diseases 14, diarrhoeal diseases 10, whooping-cough seven, diphtheria and croup six, puerperal fever two, measles one, scarlet fever one, erysipelas one, typhoid fever one. The death-rates were, at Geneva 12.3 ; Zurich 16 ; Basle 10.3 ; Berne 18.1.

The meteorological record for the week ending December 8th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps : —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
		Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Dec., 1883.																				
Sun., 2	29.680	34	43	25	82	89	70	83	S	W	NW	6	8	22	O	O	C	—	—	—
Mon., 3	30.143	19	27	11	61	46	68	58	NW	NW	W	30	19	15	C	C	C	—	—	—
Tues., 4	30.234	31	39	20	58	54	78	63	NW	SW	S	8	9	5	C	C	C	—	—	—
Wed., 5	30.016	40	45	32	94	76	85	85	SW	W	NW	3	4	6	O	O	F	—	—	—
Thurs., 6	30.453	38	46	33	75	47	74	65	NW	NW	SW	14	8	8	C	C	C	—	—	—
Fri., 7	30.488	41	49	32	78	76	98	84	S	S	S	5	7	8	C	C	O	—	—	—
Sat., 8	30.151	52	58	42	96	80	95	90	SW	SW	SW	11	11	9	O	O	R	—	—	—
Mean, the Week.	30.195	36	58	11				75											8.15	.15

¹ O., cloudy ; C., clear ; F., fair ; G., fog ; H., hazy ; S., smoky ; R., rain ; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM DECEMBER 7, 1883, TO DECEMBER 14, 1883.

SHUFFELDT, ROBERT W., captain and assistant surgeon. Now on sick leave, relieved from duty in the Department of the East, and assigned to temporary duty in the office of the Surgeon General of the Army. Paragraph 12, S. O. 284, A. G. O., December 12, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEKS ENDING DECEMBER 8, 1883, AND DECEMBER 15, 1883.

KINDLEBERGER, D., medical inspector. Ordered to the U. S. S. Hartford, Pacific Station, per steamer of the 10th inst.

GHON, A. L., medical director. Detached from duty as member of Board of Inspection and Survey on the 15th inst., and placed on waiting orders.

PECK, GEORGE, medical director. Ordered to report on the 15th inst. as member of the Board of Inspection and Survey.

DEARBORNE, F. M., surgeon. Placed on the retired list from December 10th.

HEFFINGER, A. C., passed assistant surgeon. In addition to his duties at the Navy Yard, ordered to attend officers at Portsmouth, N. H.

NORFOLK DISTRICT MEDICAL SOCIETY. — A meeting for Scientific Improvement will be held at the Medical Library, 19 Boylston Place, Boston, on the evening of Thursday, December 20, 1883, at seven P. M. Communications : The Sanitary Condition of Country Towns, J. A. Gordon, M. D. Report of a Case of Gangrene of Lung with Fetid Empyema, H. W. Broughton, M. D. Diphtheria, F. W. Vogel, M. D. ———, W. C. B. Fifeid, M. D.

G. D. TOWNSEND, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — The Dissector's Manual. By W. Bruce-Clarke, M. A., M. B., F. R. C. S., etc., and Charles Barrett Lockwood, F. R. C. S., etc. Illustrated with forty-nine engravings. Henry C. Lea's Son & Co. Philadelphia. Transactions of the American Gynecological Society. Volume VII. For the year 1882. Philadelphia, Pa. : Henry C. Lea's Son & Co. 1883.

A Study of the Tenth Census. The Increase of Insanity in the United States, Its Causes and Sources. By Foster Pratt, M. D., Kalamazoo, Michigan. A paper read before the American Public Health Association at Detroit, November 15, 1883.

Trephining the Spine. A Case? — Death! By Wm. H. Myers, M. D., Ft. Wayne, Ind.

The Late Dr. George M. Beard. A sketch by A. D. Rockwell, M. D. Read before the American Academy of Medicine, New York. 1883.

Original Articles.

SPINAL IRRITATION; PROBABLE CEREBRAL ORIGIN OF THE SYMPTOMS, SOMETIMES CLASSED UNDER THIS HEAD.

BY G. L. WALTON, M. D.

THE rôle played by the term spinal irritation has of late been greatly limited. Many cases formerly so classed have found their place under hysteria, and many more under hypochondria, both presumably diseases whose symptoms result from functional disturbance of the brain rather than of the spinal cord. The effort has been made, and with considerable success, to collect the remainder of these "nervous" cases under the term neurasthenia, while the subdivision adopted by some authors into cerebrasthenia and myelasthenia, denotes that some of the symptoms are supposed to be of cerebral, others of spinal origin.

The object of this paper is not to discuss the classification of these diseases, but to consider the relative importance of the brain and the spinal cord in the causation of those symptoms concerned, which are by many authors still attributed to "spinal irritation." It is upon the accurate analysis of these symptoms that the final classification must rest, and until this goal is reached, all efforts to arrive at exact diagnoses, and to distinguish the real from the feigned, will be but groping in the dark. This fact is not recognized by those who depreciate the importance of looking for the seat of the morbid process, and who, inverting the scientific order, propose to separate the real from the feigned among the symptoms before studying the causation and character of those symptoms.

It is the tendency of modern neurological research to transfer to the brain much of the attention hitherto given the spinal cord, but the preservation of the term spinal irritation in prominent text-books shows that there exists a set of symptoms which the medical as well as the non-medical world still ascribes to a disordered "spine." The disease called railway spine includes practically the same symptoms, if we exclude the cases in which real lesion, as hæmorrhage, exists in the cord, and this name expresses the idea that a jar to the spinal column has caused the same symptoms that sometimes follow overwork, mental strain, and the various causes of so-called neurasthenia.

Erb represents the views expressed in many text-books, when he includes under spinal irritation such symptoms as vertigo and headache, sleeplessness, inability to confine the attention, and mental irritability, and states that when the disturbance is high up in the cord these symptoms are more prominent than when it is low down. He assumes that these manifestly cerebral symptoms are dependent upon spinal disorder, although he recognizes the fact that the spinal disorder itself rests upon a mere hypothesis, and states that in the absence of pathological data the theories of spinal hyperæmia, anæmia, etc., must be regarded as merely conjectural.

The line of argument in this paper is intended to show, in the first place, that the presumptions on anatomical and physiological grounds are all in favor of the brain, rather than the cord, as the centre not only of these but also of the more general symptoms ascribed to spinal irritation; and in the second place, that in point of fact all the symptoms can be more satisfactorily

explained by supposing functional disturbance in the cerebral than in the spinal centres, while many of the symptoms can be explained only in this way. If these conclusions be established, we must look to the brain as the chief centre of the difficulty, and the cord as playing, if any, a subordinate part.

It should be premised that we cannot hope as yet to arrive at the exact pathology of the disorder in the cerebral centres. The distinctive characteristic of these cases is the absence of demonstrable lesion. Whether these functional affections of the nerve cells are due in the various cases to malnutrition (as in lithæmia), to vaso-motor irregularities, to molecular disturbance (as in concussion), or possibly to irritation through the sympathetic nervous system from abdominal or other organs, are subjects at present under discussion. It is highly improbable that any one pathology will be found applicable to all cases; perhaps all of the above causes play their part separately or in combination, so that each case must be analyzed by itself.

These symptoms may be practically considered peculiar to the human race, although they perhaps obtain to a certain degree among animals below us in the scale of development. This fact leads us to inquire what part of the nervous system is most fully developed in the higher animals, and what part is peculiar to the human race?

The answer is easy. The development of the cerebral hemispheres is not only the most distinctive feature of the higher animals, but it is the one peculiarity which gives man his supremacy among them.

On the surface of these hemispheres lie the nerve cells which constitute the final centres of sensation and motion, and which are generally acknowledged to be the seat of the mental processes. It is these delicate centres which are probably the chief sufferers in the nervous cases under consideration. It is not claimed that the spinal cord of man is on exactly the same plane of development with that of the lower vertebrates. Allowing, however, a considerable superiority in the spinal centres in man over, for example, those of the dog or monkey, we must still consider the difference trifling as compared with the difference between the brain of such an animal and that of man.

These facts do not in themselves show that all functional nervous symptoms peculiar to man come from the brain; they should, however, be taken into consideration in looking for the seat of symptoms which admit of explanation by either cerebral or spinal disturbance, especially when such symptoms are accompanied, as they almost invariably are, by those of evidently cerebral origin. As an example, a certain case presents among other symptoms mental irritability and local anæsthesia; the latter can be explained as arising either from the brain or the spinal cord; the former cannot be explained without the brain. The presumption is therefore in favor of the brain as the seat of both symptoms, whereas the old classification would attribute both to the spinal cord.

The ætiology of these cases is instructive. Lively emotions, mental distress, unrequited love, are mentioned by many authors as exciting causes of spinal irritation. Now the supposition that such stimuli as these affect the spinal cord, excepting through the brain, is absurd; but we have become so used to associating these symptoms with the spine as to have overlooked or forgotten the fact that the brain is the organ

primarily affected. It requires no stretch of the imagination to assume that the highly organized and exquisitely sensitive cerebral centres whose function it is to receive and interpret the stimuli which give rise to the mental processes may be disturbed in the exercise of their functions when such stimuli become excessive. In fact, the delicacy of organization which the cerebral nerve cells *must* have to perform their complicated functions furnishes alone a strong presumption for attributing to them the irritability and depressibility hitherto ascribed to the spinal cord, an organ containing only the lower reflex centres, which preside over functions possessed by man in common with animals far below him in the scale of development.

Trauma, in the form of falls, blows, and collisions, figures largely in the ætiology of these cases, and the nervous symptoms following a jar to the whole body have been for some time attributed to disorder in the cord, under the name of railway spine. It seems, probable, however, that "railway brain" would be a more appropriate term, first, because these delicate cerebral nerve cells must be more susceptible to a jar than the lower spinal centres; and secondly, because the spinal cord, an organ light in weight, hangs suspended in a large amount of fluid, loose areolar tissue, and a plexus of veins, while the comparatively heavy brain lies almost in contact with its bony case, rendering its mechanical liability to a shock much the greater of the two.

If the spinal cord were to suffer so severely in man from a moderate jar, we should expect a cat, whose spinal cord is approximately delicate as ours, to show some slight symptoms on falling from a height. Her immunity is probably due to the comparatively undeveloped state of her brain. In point of fact a patient suffering from so-called railway spine always exhibits mental irritability, emotional tendency, and other symptoms of evident cerebral origin. Recent investigation¹ has also shown that unilateral loss of sensation, including the head and special senses, is not unfrequently found among the symptoms, which absolutely establishes, at least in these cases, a disturbance of cerebral function.

There seems to be at present a strong movement in favor of attributing neurasthenical symptoms in many cases to lithæmia or suppressed gout. This by no means interferes with placing the seat of the symptoms in the brain, for the cerebral nerve cells may be safely considered at least *equally* liable with those of the spinal cord, or with any organ of the body, to malnutrition from disordered blood supply.

One other cause of "spinal irritation" should be considered before passing to the symptomatology. This is excessive sexual excitement. The fact that the reflex centres for erection and ejaculation are seated in the spinal cord should not lead us to identify with that region all irregularities connected with the sexual functions. We must not forget that these spinal centres are in connection with, and to a certain degree subservient to, higher cerebral centres. This is evidenced

by the fact that erection itself, while capable of being brought about in a purely reflex way, may also be produced by a thought. On the other hand it may be inhibited by a fear, as, for example, the very fear of not being able to perform the act of coitus. This subject will be alluded to again, and is mentioned here merely to remind the reader that the nervous symptoms which sometimes follow excessive sexual excitement may as well be attributed to the shock which these higher centres have received as to injury of the spinal centres connected with the mechanical portion of the sexual act.

All the symptoms of so-called spinal irritation will be found, on careful analysis, to admit of satisfactory explanation by disordered function of the cortical cerebral nerve cells, to whose sensitiveness we have alluded, and which have been stated to constitute the final centres of sensation and motion. Confining ourselves to those symptoms which seem to have been hitherto most plausibly connected with the spinal cord, we shall consider in detail only a few of the more prominent, the rest falling readily into line when analyzed in a similar manner. Such symptoms as hopelessness, morbid fears, sleeplessness, mental irritability, and inability to confine the attention, may be left out of consideration as being obviously of cerebral rather than spinal origin. The disturbances of special sense, as asthenopia, amblyopia, and nervous deafness, may be passed by for the same reason.

Besides symptoms of these two classes no less than forty others are mentioned by Beard in his work on neurasthenia, among which are included, perhaps, nearly all which have ever been attributed to spinal irritation. Among them we find pains in the back, sensitiveness of the spine to pressure, weakness in the back, tenderness of the scalp, heaviness of the loins and limbs, sensitiveness to the weather, special idiosyncrasies in regard to food, medicines, and external irritants, *anæsthesia* and *hyperæsthesia* in various parts of the body, and impotence.

The fact that these patients complain of *pains in the back, sensitiveness of the spine, and weakness in the back*, perhaps explains in great measure the association in our minds of all the other symptoms with the spinal cord. These symptoms are, however, among the easiest to dispose of. As far as we know there are no nerve cells in the cord capable of feeling. The cord can, it is true, answer stimuli by reflex action, as is seen in the decapitated frog who withdraws his foot from the acid. We do not, however, imagine that he *feels* the irritation of the acid in the ordinary acceptation of the expression to feel. Certainly no physiologist fancies that a decapitated man feels external stimuli. On the contrary the centres of sensation lie in the brain, and when we feel a pain in the back it is our cerebral centres which feel the pain. This means that a disagreeable sensation is produced by, for example, pressure on the nerve fibres distributed to the regions of the back, whether the external regions, as the skin, or the deeper-seated parts, as the membranes of the cord. That is to say the neuralgic pains in the back belong to the same category as those in the arms, legs, or face, and have nothing to do with the spinal cord itself excepting that the sensory nerves travel through the cord to reach the brain. If, then, the pains are caused by the irritability of any nerve centres it is by the irritability of cerebral, not spinal, centres. These pains, like those of hypochondria, with

¹ "Recent Investigations into the Pathology of so-called Concussion of the Spine, with Cases illustrating the Importance of seeking for Evidences of Typical Hysteria in the Chronic as well as the Acute Stages of the Disease." J. J. Putnam, M. D., Boston Medical and Surgical Journal, September 6, 1883. See, also, the following articles by the writer: "Possible Cerebral Origin of Symptoms usually Classed under Railway Spine," Boston Medical and Surgical Journal, October 11, 1883; and "Case of Typical Hysterical Hemianæsthesia in a Man, following Injury," Archives of Medicine, New York, July, 1883.

which they are really coincident, probably mean that the cerebral centres are so sensitive that the normal pressure of part upon part in the body becomes painful, just as the auditory centres become sometimes so sensitive that the ticking of a clock causes distress, while in the normal condition it would hardly be noticed.

The term spinal irritation, therefore, used as it undoubtedly is to express the idea that irritability of the spinal nerve cells furnishes the basis for these symptoms, is certainly misleading.

Sensitiveness of the spine to pressure has probably no more to do with the spinal cord itself than sensitiveness at the supra-orbital notch in frontal neuralgia. The tender spots over the spine represent the course of the sensitive nerves over the spinal cord, not the nerve cells in the spinal cord. *Sensitiveness of the scalp*, one of the most common symptoms, falls into a similar category excepting that when it occupies parts of the scalp supplied with sensation by nerves which do not even pass through the cord on their way from the brain to the periphery, the absurdity of considering the spine the seat of disorder becomes the greater.

The feeling of *weakness in the back* means probably that the muscles of the back are wearied in holding up the vertebral column, just as any other muscles may tire of performing their functions, and we have no reason for seating the feeling of weariness or weakness in the spinal centres, but must refer these sensations directly to the brain, the seat of all feeling. The sense of *heaviness in the loins and limbs* must be classed with the feeling of weakness in the back, requiring therefore no further discussion.

Special idiosyncrasies in regard to weather, food, medicines, and external irritants may be all classed together as common to hysterical, hypochondriacal, and so-called neurasthenical patients, as well as those suffering from "railway spine." Such patients report the most severe symptoms following directly upon the application of cold water or electricity, and upon the exhibition of drugs in absurdly minimal doses. In such a patient a wet pack may cause weakness and trembling for days, and an apparently alarming prostration may follow a brief exposure to the heat of the sun. Such symptoms are apt to vary greatly in severity according to the solicitude of the family and the interest of the medical attendant, and while they are by no means to be passed by with the mere word "imaginary," they are so obviously to be explained by perversion of cerebral function as to require no discussion in this paper.

Anæsthesia and hyperæsthesia, however limited in extent, may be of cerebral as well as spinal or peripheral origin, and when these disturbances occupy the whole of one side of the body, including the head, they can only be explained as arising from the brain. Now a number of these cases have been found to suffer from unilateral loss of sensation, not only involving the integument of the head, but also the special senses. This fact alone leaves the presumption in favor of the brain as the seat of all the disturbances of sensation.

The last symptom on the list is *impotence*. The lower and higher centres presiding over the sexual act have been already alluded to. Attention has been called to the fact that the spinal centres for erection and ejaculation are under the influence of the higher cerebral centres; that the reflex may be started by a thought and may be inhibited by a fear. While confidence is a necessary factor in the consummation of the sexual act, depression, anxiety, or even the diversion

of the mind into other channels may prevent it. Interesting cases have been recorded in which the thoughts of business or of a mathematical problem have persistently prevented the consummation of the marital relations in persons otherwise healthy. These facts illustrate the close relation between the mind and the sexual activity; and if a mere emotion, or the diversion of the thoughts to other subjects, can render a comparatively healthy man temporarily impotent, it must be allowed that persistent functional derangement of the cerebral centres may cause lasting impotence.

The arguments in this paper tend to show that, —

(1.) The presumptions on anatomical and physiological grounds are all in favor of the brain rather than the cord, as the seat of the functional nervous disturbances, attributed by some authors to spinal irritation.

(2.) In point of fact the symptoms involved are more satisfactorily explained on the ground of cerebral than of spinal disorder.

No exhaustive discussion of the subject has been attempted, but it is hoped that this brief sketch of the main points at issue will serve to throw doubt upon the appropriateness of the term spinal irritation, at least with its present signification. It is believed that the views here advanced are so far in accordance with the tendency of recent neurological research as to meet with general recognition. In this case the mental symptoms in neurasthenia and allied diseases will surely be considered by no one as dependent upon spinal trouble, but will be looked on as indicative of the disturbance of cerebral function which gives rise to these and all the other symptoms. The accurate localization of the symptoms being once determined, the field is cleared for the study of the pathological changes giving rise to the disturbance.

LARGE VESICAL CALCULUS IN AN INSANE PATIENT. REMOVAL THROUGH VAGINA. DEATH ON SIXTH DAY. AUTOPSY.

BY C. P. BANCROFT, M. D.,

Superintendent New Hampshire Insane Asylum.

PATIENT thirty-eight years of age. Has been insane for over two years. The form of her insanity, chronic mania, with hallucinations of hearing and smell. During the entire period of her insanity patient has been much excited, at times incoherent, and generally very irritable and capricious. For a long time she insisted that there were noises in her ears, and expressed it as her opinion that there was some animal lodged within the external ear. She made many attempts to reach this imaginary animal by inserting rags, hair-pins, sticks, and other foreign bodies. Finally she insisted that there was a skunk in her nose, and that the odor was very perceptible to her. She introduced a piece of stout wire, seven inches long and bent on itself, into the right nostril, and passed it back into the posterior nares. One point appeared at the nostril, and the other curved up and inserted itself between the nasal bones at their junction with the upper lateral cartilages. The blunt end, which resembled the closed end of a hair-pin, was back in the posterior nares. This wire I was obliged to cut an inch within the nasal cavity, and, by making an incision between the two nasal bones, remove one part through the bridge and the other part through the nostril. After this episode

the patient began to entertain the idea that something was lodged within the bladder. Finally, while alone, and entirely unbeknown to others, she passed a hair-pin into the urethra. This was caught up by muscular contraction and carried beyond her reach. Soon vesical irritation declared itself, and after a little while the patient voided a hair-pin pretty completely encrusted with urinary salts. Notwithstanding that her suffering must have been intense, she made no complaint, and consequently nothing was known of her trouble until she presented the hair-pin to the medical interne, Mr. J. P. Dana. But about this same time, April 1, 1883, the patient, unbeknown to others, inserted a second hair-pin. The passage of the first, together with a temporary amelioration of symptoms, led us to think that the trouble was over. From this time until October the patient made no complaint, but studiously kept by herself. Having an insane dislike to myself and to the assistant physician, Dr. Benner, she would allow neither of us to approach her. It is certainly remarkable that during this long period of most intense suffering she never made any complaint, her insane delusions in regard to persons and things enabling her to endure the most exquisite pain without making the slightest mention of it. Finally her suffering became so great that she could not disguise the fact in her physical appearance. She began to remain in bed, and appeared depressed and very unlike her maniacal self. During the last of October I was able to get her confidence sufficiently to induce her to make a true statement of her real condition. She then told me that she suffered the most intense pain in passing water; that she could only void it when on her hands and knees and by pressing over the pubes. I questioned her more closely, and she admitted that she inserted *two* hair-pins instead of one about the first of April. A period of seven months had therefore elapsed from the date of the insertion of the hair-pin and her first mention of it.

On October 28th I passed a silver catheter, and detected a hard substance at the neck of the bladder. The finger in the vagina disclosed a hard projection at the same point.

On November 2d patient was etherized. Assisted by Drs. Walker, Benner, and Pearson, I gradually dilated the urethra so that the forefinger could be admitted. The tip of the forefinger came directly upon the calculus at the neck of the bladder, and disclosed the fact that the stone bulged rapidly from the end first felt, and that it was one of very large size. As extraction through the urethra was out of the question I introduced a grooved director, and with patient in Sims's position made an incision an inch and one eighth long through the vesico-vaginal septum. Through this opening the stone was removed. It was as large as a medium-sized hen's egg, weighed 950 grammes, and presented the two points of a hair-pin projecting toward the neck of the bladder, the blunt end appearing at the upper part of the stone toward the fundus. The base where the stone rested was rough and gritty from particles of phosphatic concretion. After thorough cleansing the incision was closed with four silver sutures and patient returned to bed. After the operation she rallied very slowly; there was some vomiting; pulse was very weak and thready. Rectal and subcutaneous injections of brandy revived her to some extent.

November 6th. The record says: "The history of

the past few days has been one of weakness and uncertainty. Her stomach has refused all nourishment, and the suspicion arises that the vomiting may be due to imperfect action of the kidneys. Yesterday and the day before injections per rectum were instituted." The bladder was washed out, but the water returned almost as soon as injected. Incontinence is a marked feature, the urine dribbling constantly from the urethra. Menstruation commenced to-day. Patient troubled with hiccoughs.

November 8th. Night before last watery discharges from bowels began, and the following forenoon the vomiting almost entirely ceased. The weakness continues, however. At no time since the operation has there been fever or a pulse faster than 96. But the pulse has been, though slow, extremely weak. Patient has been perfectly clear in mind up to last evening. This has been a very characteristic feature in the case. Whenever the patient has been severely prostrated physically she has invariably presented symptoms of mental improvement. During the entire period since operation she has discussed her case as intelligently as a sane person could have done. So frequently does this occur in the insane who become physically prostrated that one is often reminded of a metastasis, and led to conjecture whether a morbid element circulating in the cerebral centres has not actually removed itself to some other more vulnerable part. However this may be, last evening patient began to appear drowsy. This sleepiness has continued to-day. She would be aroused sufficiently to take nourishment, and immediately go to sleep. Pulse has continued about 96, with no fever. About five P. M. she suddenly exclaimed to the nurse that she suffered extreme pain in the right iliac and hypogastric region, and asked her to turn her over. She also said that she was dying, and wished the nurse to send for a physician. The nurse helped turn her over, but she almost instantly collapsed. Within five minutes I was present, but she was dying as I entered the room.

Autopsy nineteen hours after death. Rigor mortis well marked. Bladder, uterus, ovaries, and upper wall of vagina removed entire. The anterior wall of bladder was so firmly adherent to the anterior wall of abdominal cavity that it could only be separated with some force and by careful dissection. The entire mucous surface of the bladder was very dark, congested, and thickened, and bore evidences of long-continued suppuration. The walls of the bladder presented two large cysts: one in the right wall, about midway between fundus and neck, evidently developed about the point where right ureter entered the bladder; the other cyst was at the very fundus. The antero-posterior cyst was quite large, and was firmly adherent to the anterior walls of abdominal cavity. The interior of this cyst was filled with fibrous bands, phosphatic accumulations, and fetid pus. On the external wall of this cyst were two points of ulceration: one of these points had already perforated into the abdominal cavity, leaving an opening large enough to admit a probe; the other presented a discolored spot with thinning of walls and slight depression resulting therefrom. The superior cyst was smaller, sacculated, and filled with phosphatic debris and pus. This cyst marked the point where doubtless rested the blunt end of the hair-pin. By continued pressure this had produced thickening of the walls, and finally a sacculated cavity. At the neck of the bladder was a large, ragged de-

pression representing the spot where the stone rested. Constant pressure had set in action an ulcerating process, showing how nature was attempting to remove the obstacle through the vagina. The wire sutures approximated perfectly the vaginal surface, but the mucous membrane of the bladder was in no way approximated, as its ragged, ulcerated condition would not admit of such union. The edges of this ragged depression were full of small particles of phosphatic debris, showing that the stone had been crowded down with much force into the neck of the bladder. The kidneys each weighed five ounces. In both the pelvis was dilated to quite an extent, but there were no especial evidences of damage to the rest of the organ. The cortex was of normal appearance, other than showing a certain degree of congestion.

The sequence of events is an interesting one. A hair-pin slipped into the bladder through urethra; the two points became engaged in the mucous membrane and prevented its exit. Phosphatic crystallization about the hair-pin; ammoniacal urine and resulting cystitis. Stone grows large, almost concealing the pin. Bladder makes efforts to overcome the constantly increasing obstacle, assisted by abdominal pressure from the patient. The stone becomes a ball-valve dropping into the urethral orifice at base of bladder, and completely preventing exit of urine; by assuming knee-elbow position this ball is allowed to slip back and allow the passage of a little urine past it. In this way patient at last voided nearly all her urine. Pressure from without and within impels the fundus on to the blunt end of hair-pin, thereby causing thickening, rupture of inner wall, and formation of cyst. This double pressure causes also forcible backing of water up ureters into pelvis of kidneys, and this in turn produces dilatation of this part. Finally this constant backward pressure separates muscular walls of bladder at point of entrance of right ureter; nature resists by throwing out inflammatory coverings; a cyst develops which is firmly attached by these resisting inflammatory processes to the anterior wall of abdominal cavity. At last nature herself is overcome; she is trying to expel the obstacle through an extemporized path into the vagina, at the same time guarding against any such accident as rupture of the expelling parts; unable to meet this double duty, one weak point gives way; perforation occurs into the abdominal cavity, followed by shock, collapse, and death.

RECENT PROGRESS IN SURGERY.

BY A. T. CABOT, M. D.,

Surgeon to Boston Children's Hospital, Out-Patient Surgeon to Massachusetts General Hospital.

EXCISION OF THE KNEE-JOINT.

DR. G. E. FENWICK,¹ in a little monograph upon this subject, reports twenty-eight cases of excision done in the Montreal General Hospital since 1865, of which twenty occurred in his own service. He calls particular attention to his method of sawing the bones, which is to round off the end of the femur so as to be convex downwards, while the section of the tibia is made to form a concavity into which the end of the femur may be fitted. This procedure, he says, obvi-

ates to a great degree the tendency to antero-posterior displacement, and enables the operator to remove the whole articulating surface of the femur without encroaching on the line of the epiphysis.

Dr. Fenwick is very earnest in his praise of Dr. Watson's² splint for securing immobility after operation, which he says has all the advantages claimed by the inventor. He applies it, however, with a paraffine bandage instead of with plaster of Paris, as suggested by Watson.

Dr. Davy³ reports twenty-one cases of recovery after excision of the knee without a death. Of these patients only two were over fifteen years of age. He advocates the performance of excision in children, even when the epiphyseal cartilage has to be removed, on the ground that the shortened leg with a foot at the end of it is better than any stump. Dr. Davy endeavors to prevent antero-posterior displacement of the bones by a procedure similar to that employed by Dr. Fenwick, namely, by a sort of tenon-and-mortise joint between the ends of the bones.

TREATMENT OF MAMMARY CANCER.

Küster, in a paper read before the Twelfth Congress of the German Surgical Society, advocates the careful dissection and removal of the contents of the axilla in every operation for cancer of the mamma.

This recommendation, which is not new, gains weight from his report of the careful microscopical examination of the glands in a number of cases where they were seemingly unaffected, and in which, nevertheless, a commencing cancerous change was found in them.

To show the effect of this thorough operation in preventing recurrence Küster states that, of sixty women whom he had thus operated upon prior to three years ago, thirteen, or 21.66 per cent., remain well.

Gussenbauer, Langenbeck, and Esmarch spoke in favor of this thorough operation, and Esmarch even declared that when the glands were intimately adherent to the vessels and nerves, and yet there was no appearance of the disease in other parts, he was in favor of disarticulating the arm to permit of thorough removal; and he stated that the only case in which he had done this recovered, and has never had a return of the disease.

ON THE ENTRANCE OF AIR INTO THE VEINS DURING OPERATIONS.

Mr. Frederick Treves⁴ reports two cases in which, during operations upon the neck, air was drawn into the veins with an audible hissing sound. In both cases the wound was at once flooded with water, and firm pressure caused a bubbling up of air in considerable quantity in the wound. Both patients recovered. One was a child of two years, in whom tracheotomy was done for the removal of a foreign body; the other was a man of fifty, whose common carotid artery was tied.

Mr. Treves calls attention to the fact that the danger of this accident is imminent only when the wound is comparatively dry, as fluid in the wound effectually closes the orifices of the veins against the air. He advises, therefore, that during operations in dangerous proximity to venous trunks a sponge full of warm water be kept at hand to squeeze into the wound at

² Excision of the Knee-Joint, by Patrick Heron Watson, Edinburgh, 1867.

³ British Medical Journal, October 20, 1883.

⁴ British Medical Journal, June 30, 1883.

¹ Excision of the Knee-Joint, by George Edgeworth Fenwick, Montreal, 1883.

the first sign of danger. His cases would also go to show that by quick compression of the chest much of the air can be driven out of the veins again after it has entered.

COMBINED INTERNAL AND EXTERNAL ŒSOPHAGOTOMY.

Gussenbauer¹ reports two cases of stricture of the œsophagus, impermeable to the finest bougies, which he treated successfully by a method to which he gives the name of "combined œsophagotomy."

The œsophagus was first opened by the ordinary cut of external œsophagotomy; from there a probe and then a director was passed through the narrowed portion, and with a herniotomy knife, guided by the director, the stricture was incised anteriorly and somewhat laterally. A catheter was then passed into the stomach, and left there for the purpose of nourishment. Later some further dilatation by bougies was accomplished.

CASE I. A girl of twenty-six. Œsophagus extensively cauterized with sulphuric acid, taken with suicidal intent. Stricture extended from the level of the cricoid cartilage to about opposite the bifurcation of the trachea. After incision as described a catheter (No. 24 French) was passed, and before she left the hospital dilatation was carried to No. 36 French. She soon neglected to pass her bougie, and speedily came back with a stricture requiring the "combined œsophagotomy" to again overcome. Since this time the constant use of bougies has kept her throat permeable.

CASE II. Girl, two and a half years old. Tight stricture near cardiac orifice due to swallowing carbolic acid. Stricture dilated by method described till it would take a No. 80 French bougie. This is passed by the child's father once a week, and the stricture is thus kept open now, one year after operation.

In none of these operations was there considerable bleeding.

TREATMENT OF FRACTURE OF THE PATELLA.

Professor Lister² reports seven cases in which he has cut down upon and wired the fractured patella. Three of these cases were of recent fracture; in two the fracture had existed for one or two weeks, and two were cases of old ununited fracture.

All of the patients recovered with bony union between the fragments and with useful legs.

In some of the later cases the wire after being twisted was bent and hammered down upon the anterior surface of the patella, where it healed over and gave no subsequent trouble.

The ardor of reckless imitators may be somewhat damped by Professor Lister's remark, that he "considered no man justified in performing such an operation, unless he could say with a clear conscience that he considered himself morally certain of avoiding the entrance of any septic mischief into the wound."

REMOVAL OF GOITRE.³

Professor Kocher, of Berne, speaking of operative interference in the treatment of goitre, stated that since 1877 he had operated one hundred and three times for the removal of thyroid tumors.

The dangers most to be feared are the wounding of

the recurrent laryngeal nerve and the difficulty of avoiding and checking hæmorrhage. The incision employed was a curved one, and the vessels, both veins and arteries, were sought out and tied separately; this was the more easy as a certain regularity of distribution was noticed in the veins as well as in the arteries. Tracheotomy was avoided when possible.

Partial excision by the removal of one half of the thyroid tumor also has given satisfactory results. The portion of the tumor left has rarely shown subsequent growth or given inconvenience.

The trachea has been observed to become atrophied after total excision of a goitre, with ligature of the main arteries supplying the thyroid gland, owing to the fact that the inferior thyroid artery supplies the trachea with most of its blood.

Wölfler said that according to Billroth's experience it is wiser not to operate on thyroid tumors simply on account of the deformity, but that, on the other hand, if dyspnoea compels one to the operation, neither pregnancy nor advanced age are to be regarded as contraindications.

Billroth always makes his incision along the sternomastoid muscle and opens the capsule of the goitre.

In tying the inferior thyroid artery the recurrent laryngeal nerve is to be especially looked out for and avoided. If parts of the growth are left adherent to the trachea a recurrence is to be feared.

Maas urged against operating except in case of necessity, as in the greater number of goitres treated in the Freiburg Clinic a cure was attained by the internal and local use of iodine.

RADICAL CURE OF HERNIA IN CHILDHOOD.

Mr. Pughe⁴ advocates the treatment of large herniæ in children by what he terms "the open method." This consists of the usual operation of herniotomy with ligature of the sac at the internal ring.

The steps of the operation are as follows: The sac is uncovered by an incision commencing a little above the internal ring and running down over the hernia for about three inches. "The sac is then separated from the cord and freed from surrounding structures, and a ligature of chromicized cat-gut is passed round it with an aneurism needle. The contents of the hernia being now returned to the abdomen and the sac drawn down, the ligature is tied once or twice round its neck as high up as possible. Lastly, the sac must be incised and drained.

To quote from the author: "The all-important point undoubtedly is to firmly and securely ligature the sac at the inner ring, that is, at the part where it becomes continuous with the general cavity of the peritonæum, so as to make the peritoneal surface perfectly level over the internal opening into the canal. The depression over the internal ring is thus obliterated; and by preventing the hernia from descending into the sac and dilating the canal after the manner that the bag of membranes acts on the os uteri, the evil is cut off at its very root, as it were, and the tendency towards a reformation of the hernia is entirely done away with."

— The *Sanitarian*, after a year's experience as a weekly publication, announces a return to its old form as a monthly, but enlarged to ninety-six pages, and with improved type.

⁴ British Medical Journal, November 10, 1883.

¹ Zeitschrift f. Heilkunde.

² Lancet, November 3, 1883; British Medical Journal, November 3, 1883.

³ Beilage zum Centralblatt für Chirurg., 1883, No. 23.

Hospital Practice and Clinical Memoranda.

GENERAL TUBERCULOSIS AS ONE OF THE SEQUELÆ OF TYPHOID FEVER.

BY GEORGE H. LYMAN, M. D.,
Visiting Physician Boston City Hospital.

THE following case presents some features of interest in the way of diagnosis, it being an instance of rapid development of tubercle in serous membranes, with no positive pathognomonic symptoms. The autopsy as recorded by Dr. Gannett revealed chronic fibrous pachymeningitis, tuberculosis of pia mater, peritonæum, pleura and lungs, also chronic diffuse nephritis, fatty infiltration of liver, fatty degeneration of the intima of the aorta, and perforation of the intestines.

Anna W——, aged twenty-three, a widow, delicate, but fairly healthy looking, was sent to the City Hospital, October 5th, as a case of "threatened miscarriage, complicated with typhoid." Both parents died of phthisis. Excepting scarlatina and diphtheria had never had any severe illness. Never had children. Two miscarriages, the last two years before entrance, since when she has been subject to dragging pains in the loins. Menses always irregular, often delayed for two or three months; flow and pain moderate. Her last period was two months ago. Has now some slight flowing; ceased following day. She says that about the middle of September she began to have headache, backache, general malaise, and chilliness with marked prostration, confining her to her bed. For a week has had some diarrhœa with colicky pains, no tenesmus, and dejections free from blood and mucus. Says she has had some vomiting, slight sore throat, and hacking cough, without expectoration. Has always been troubled with slight palpitation, dyspnoea, and œdema of ankles. Her appetite is poor, and she is restless at night. Micturition normal. On examination no marked pulmonary symptoms. Soft systolic murmur at base of heart. No headache. Tongue clean and moist. No rose spots nor epistaxis. Tenderness in left iliac region. No gurgling. Considerable tympany, but no tenderness on pressure. Temperature 99° F.; pulse 118.

There being some doubt as to her antecedents it was for a day or two thought possible that another miscarriage was impending.

October 10th, five days later; no flowing nor signs of pregnancy. Temperature 102° F.; pulse 110. Has vomited but a few times since entrance. Tympany still continues; but she makes no complaint of it nor of the weight of the stupes and fomentations. Legs not drawn up. She has three or four loose yellow dejections daily. The skin is always soft and warm. Says she is quite comfortable, and in fact she has made no complaint at the daily visit of pain. Is always cheerful, and says she is doing well.

The daily temperature, the tympany, and the continuance of the thin yellow dejections, in the absence of any other recognizable cause made the diagnosis of typhoid with which she entered the hospital most probable. On the 14th, four days later, her morning temperature was 102° F.; pulse 140, and becoming more feeble. Tympany unchanged; æmia more marked; hæmorrhage feared. On the 18th complained for the first time of slight pain in right side of chest; no cough; a friction rub was discovered.

October 19th. Temperature rose to 103.2° F.; pulse 152.

October 26th. Pulse during last week about 130; temperature varying from 100.2° F. to 103.2° F., five-grain doses of quinine having no perceptible effect.

October 28th. Looks better; pulse 120; temperature 99.2° F.; abdomen less tense; has always taken nourishment well, though quite indifferent to it, but to-day she asks for more food.

October 31st. Morning temperature rose to 104.2° F., with a rigor, but in evening fell 6.6° F. to 97.6° F.

November 7th. Had a chill day before yesterday, and again this evening, with slight hæmorrhage from the bowels.

November 9th. Involuntary dejections; complains of nausea and objects to nourishment.

November 11th. Mild delirium for thirty-six hours; at five A. M. took brandy and water without trouble, and in ten minutes was found dead.

There are two ways of looking at this case. We have here a patient who, previously in good health, after two months of illness without any positive pathognomonic symptoms, dies of the effects of extensive tuberculosis. During life, with the exception that a typhoidal element complicated her case, there was nothing to justify a positive diagnosis. Until two days before her death she was cheerful, complained of no pain in particular, took and digested a fair amount of nourishment, slept fairly well, had no pulmonary or cerebral irritation. The principal symptoms, exclusive of some long standing uterine disturbances, were exaltation of pulse and temperature, abdominal tympany, and anæmia. For the first three weeks, and before her entrance to the hospital, they were apparently those of a mild typhoidal attack (and in the absence of any better history one is tempted to so consider it). In this view the general tuberculosis may be looked upon as a not improbable sequence, her parents having died of phthisis. Its rapid development without more definite signs is sufficiently noteworthy as one of the not very common sequelæ of typhoid fever.

Liebermeister states that out of two hundred and fifty autopsies after typhoid this condition was found four times only. His presumption is that such cases occur in persons who have the specific poison of tubercular phthisis lying latent within them, and that the fever with its sequelæ only serves as an exciting cause for the development of these processes. He also alludes to the fact that miliary tubercle may be developed in the pia mater (and presumably elsewhere) without a single symptom leading to suspicion of its existence.

But, on the other hand, the autopsy in this case reveals no evidence of typhoid, and the question arises was not this a case of tuberculosis *ab initio*.

What the chart was for the three weeks before entrance in the early stages of the disease we have no means of knowing, and from the date of entrance it gives us little help. It resembles any other in which complications have ensued after the typhoidal poison may be supposed to have been eliminated. There was no history of rose spots or epistaxis, and the tongue was so entirely clean and natural as to excite constant remark.

That the post-mortem appearances in an ordinary case of uncomplicated typhoid fever are decisively characteristic is undoubtedly true, but milder abortive cases resulting in recovery leave us of course without this

positive method of confirming the diagnosis. In these abortive cases, however, such perhaps as the one now reported, where a subsequently fatal result is directly due to some complication, excited to active development by the primary febrile condition, all anatomical evidences of which may in the mean time have disappeared, is the absence of these ordinary post-mortem signs conclusive as against typhoid.

Is it true that the agminated or solitary glands or follicles in cases of abortive typhoid, where there is probably but a slight degree of infiltration, never so far return to their normal condition as to remove all anatomical evidence of previous disease. Liebermeister says: "When the infiltration extends only to a moderate degree, the swelling may gradually diminish by degeneration and absorption until the patches and follicles return to their normal condition." Friedrich also, as quoted by Aitken from the *British and Foreign Medico-Chirurgical Review* for July, 1858, on the Enteric Fever of Children, holds that the infiltrated follicles or vesicles, either from the resorption of the infiltrated material or more often from rupture into the intestinal canal, revert to a normal condition without the formation of any cicatrix.

PROBABLE PROGRESSIVE HÆMORRHIAGE INTO BOWEL DEPENDING ON GENERAL DISORGANIZATION OF THE BLOOD.¹

BY R. M. HODGES, M. D.

MRS. —, aged twenty-eight, mother of two children, and who, though never robust, had been in better health than usual during the past winter. Dr. Hodges was asked to see her at his convenience, as she was not feeling very well, although out and about as usual. At his first approach to her bedside he was struck by the extreme lividity of her countenance, which reminded him of cholera cases. The tongue and fauces even were black, but the throat presented nothing otherwise unnatural; the pulse was good; breathing quiet and calm; auscultation and percussion normal. No local cause for the condition could be detected, and there was no explanation of the appearance presented by the patient to be derived from her previous history. The only complaint made was of an annoying pain when, as she said, she hiccupped; the "hiccup" being in reality the eructation (in a very moderate degree) of gas from the stomach. An hour later attention was called to the patient's urine. But little had been passed during the night, and the specimen shown was less than half an ounce, and black like that in cases of carbolic-acid poisoning. It was examined by Dr. E. S. Wood in less than an hour after it was passed, and contained one fourth per cent. albumen, numerous brown, granular casts, and much blood; the specific gravity being 1012. This suggested acute nephritis, and dropsy was expected, but it never came. In the afternoon there was a large, black, tarry dejection, not seen except by the nurse. Dr. M. Wyman, of Cambridge, visited the patient in consultation on the first day of her sickness.

The urine of the second day, also examined by Dr. Wood, contained no blood, but an immense amount of

blood pigment in solution, and a large quantity of serum albumen. Otherwise the same general characters remained. The patient's symptoms were unchanged, though the lividity had diminished. There was occasional nausea. She had one loose black dejection. There was considerable thirst, and simple food was relished. Dr. Wyman again saw the patient in consultation.

On the third day the urine regained its natural color and the crystals of hæmatin disappeared. But one granular cast was found in a careful examination of five slides. The amount of albumen had, however, increased. The patient complained of severe headache, as well as of pains about her waist, first on one side, then on the other, but they were never severe, nor was their nature comprehensible. Her color continued to improve, and she took milk, beef tea, jelly, and champagne with much satisfaction. She had one dejection similar to that of the day before. Her intelligence and cheerfulness were not disturbed.

On the fourth and fifth days there were ten black and bloody dejections, some of them mixed with a good deal of transparent mucus, for which ergot and bismuth were given, and with apparent success, so far as the evacuations were concerned. The general condition continued about the same, and on each of these days she took and relished a chop, and some broiled chicken.

At the end of the fifth day she began to have dyspnoea and rapid breathing, and was restless during the night. This condition was first seen by the speaker on the morning of the sixth day, when the complexion had become sallow and the lips pallid. An eighth of a grain of morphia had been given the evening before, but this was thought to have nothing to do with the disturbed breathing, as she had taken it on other occasions without any unpleasant effect. The respiratory and cardiac sounds continued perfectly good, and at her solicitation the patient was placed in a chair for an hour at noon, as a relief to the restlessness and dyspnoea. In the afternoon some slight râles were detected in the *front* of the chest, the respiration and percussion being elsewhere natural; the pulse fell from the seventies into the sixties, the heart sounds grew faint, the temperature went below normal, weakness increased, and death occurred at night. Dr. Wyman again saw the patient on this day.

At no time during the patient's illness did the amount of urine passed in twenty-four hours exceed two ounces. The temperature never rose above 98° F. She had very fair sleep at night, until that of the fifth day. There was never any somnolency or delirium, or any abatement of her cheerfulness and intelligence until the afternoon before her death. The increasing pallor, together with the other symptoms which have been narrated, suggested that the fatal result was due to a progressive hæmorrhage into the bowel, apparently owing to some general disorganization of the blood itself. There were no purpuric spots. Careful inquiry failed to obtain anterior evidence of any chronic renal symptoms, or other organic affection, or of any possible and recent drug poisoning. The patient had been frequently under the care of Dr. Hodges.

The treatment pursued was stimulating, supporting, anodyne, and expectant. Packing with blankets wrung out in hot water, and counter-irritation with mustard, were resorted to for the suppression of urine.

There was no autopsy.

¹ Read before the Boston Society for Medical Improvement, May 14, 1883.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. SUCKINGHAM, M. D., SECRETARY.

DECEMBER 10, 1883. DR. CHARLES D. HOMANS presided.

DR. C. B. PORTER presented a specimen from a case of

OLD STRICTURE, MULTIPLE ABSCESS, PERINEAL SECTION, SEPTICÆMIA, DEATH.

E. S. R., aged forty-three, entered hospital November 28th. Stricture for many years. Eight years ago had it divulsed at Massachusetts General Hospital. Four years after, having failed to pass sound as directed, had recontraction with urethral rupture, urinary infiltration, and abscess in perinæum. Perineal section was performed outside the hospital, from which he recovered. He was again neglectful of passage of sounds, and the stricture recontracted. About six months ago had fresh infiltration. At entrance to hospital he passed a stream the size of No. 6, French scale. The examination of perinæum shows a typical "watering pot" perinæum; there are several fistulæ, the result of old abscesses, and at junction of left thigh with perinæum is an abscess the size of a goose egg. The whole perinæum from scrotum well back towards the anus is inflamed, tender, and infiltrated. The abscess was laid open and syringed out with an antiseptic solution. On the following day, November 31st, a small-sized bougie, No. 6, French, was passed, and, fortunately, entered the bladder. It was retained in the urethra until the following day, when perineal section was performed with the bougie as a guide. The tissues of the perinæum were very dense and hard, infiltrated with pus, exceedingly foul and offensive. A catheter, size No. 23, French, was passed, and fastened in the bladder with a tube attached emptying into a receptacle by the side of the bed.

December 2d. Patient fairly comfortable; passed a good amount of urine; temperature, however, 104.8° F.

December 3d. Temperature 104°+ F. Complained of pain all over. Wound looked well. Syringed with carbolic solution every morning.

December 4th. Temperature 102.6° F.; nausea and vomiting. Quinine, two grains, every three hours; whiskey, half an ounce, every two hours. Examination of urine by Dr. Wood. Specific gravity 1023; reaction alkaline; albumen, one fourth per cent.; sediment excessive; pus; considerable blood; urethral cells; occasional hyaline and granular casts.

December 5th, four days after the operation, patient restless, tossing in bed; pulled the catheter out; skin hot and dry; temperature 102.9° F. Very little urine secreted. Pilocarpine, one sixth grain, subcutaneously, and repeated in twenty minutes, produced free diaphoresis. A drachm of brandy given every half hour. Temperature at night 104.9° F.

December 6th. Condition about the same. Only takes very little nourishment. Urine diminished very much. Spotted appearance very generally diffused over skin; slight twitching of hands and feet; lies in a stupor from which he is easily aroused; pulse 150, weak and feeble, and somewhat irregular; has had involuntary dejections.

December 7th. Passed a fairly quiet night. Throat

very dry, and voice husky; talks with difficulty; eyes have glazed and vacant look. Refused to take nourishment after eleven A. M.; breathing became very labored; pulse very rapid and almost imperceptible. Died about two P. M., sixth day after operation.

Autopsy made by Dr. R. H. Fitz, twenty-three hours after death.

Diagnosis. Chronic adhesive pleurisy. Cheesy broncho-pneumonia. Interstitial pneumonia. Cloudy swelling of heart, liver, and kidney. Acute splenic tumor. Old cicatrix of right kidney. Hæmorrhagic cystitis. Pyelitis. Stricture of urethra with perineal fistula and perineal incision. Acute septicæmia.

DR. PORTER called attention to the continuous high temperature. It was never much below 103° F. after first going up. He said that he felt confirmed by this case in the belief that, in addition to free drainage, injections, and sprinkling with iodoform, cases of perineal section should have a daily sitz-bath of phenyle lasting from twenty-five minutes to half an hour, enabling the parts to fill up with lotion to an extent that injections will not accomplish. This he had formerly done, and he would never again omit it until he had proof that it did no good. Every urethral surgeon knows that a cut or even the passage of a bougie in a patient with pyelitis or cystitis may cause fatal shock or other grave symptoms. Dr. Bigelow had told him of a death occurring in twenty-four hours from taking a gutta-percha cast of the urethra. Where the urine is alkaline the speaker thinks there is much more danger than where it is normal.

DR. G. H. LYMAN read the regular paper of the evening, —

GENERAL TUBERCULOSIS AS ONE OF THE SEQUELÆ OF TYPHOID FEVER.

Dr. Lyman said that he did not regard the diagnosis as certain. He had presented the case in order to call out a discussion. These cases usually appear at the hospitals with unsatisfactory and inaccurate histories of the previous symptoms. This patient had a very clean tongue, but everything else about the case suggested that the tuberculosis was a sequel to mild typhoid.

DR. W. W. GANNETT said that he thought that the existence of tuberculosis accounted for the symptoms. The diagnosis is a question of definition. If typhoid is an enteric fever with certain lesions he failed to see its presence. He had met with five or six cases of miliary tuberculosis in which the diagnosis of typhoid had been made during life, and spoke of the extreme emaciation and the fact that they neither got better nor worse for some time. Typhoid patients either get well or they die.

DR. LYMAN said that typhoid does not always get well at a regular period. It may last six or eight weeks with continued high temperature, and then end in recovery. He thinks, however, that these prolonged cases are those in which we are most likely to find complications, but that we do not always do so.

DR. O. W. DOE remarked as follows: There is no doubt that this was a case of acute tuberculosis, and the question at issue is whether it was such *ab initio* or was a sequel of typhoid fever. It seems to me much more likely the former, the symptoms most manifest being those of tubercular peritonitis. The autopsy shows no lesions which can be referred to typhoid excepting the perforation, but this is often seen in tuber-

cular peritonitis. Bristow, in his article on this disease in Reynolds' System of Medicine, says we find here strong fibrous bands consisting of lymph, which have assumed the form of connective tissue, and in these bands large masses of tubercles are seen which frequently invade the intestinal walls, and lead to ulcerations from without. The symptoms of tubercular peritonitis are almost the same as those of typhoid fever as given by Dr. Harley, excepting that in peritonitis the tongue is usually moist and clean, exactly the condition that Dr. Lyman particularly refers to in his case. There are also tympanites, abdominal distention and tenderness, and diarrhoea. Tuberculosis is developed *ab initio* in anæmic and debilitated patients with a hereditary predisposition to the disease, and this was the condition Dr. Lyman's patient was in, owing to her previous miscarriages; whereas, when it occurs as a sequel to typhoid, both Hirschfeld and Ruehle concur in the opinion that it arises from the absorption of the matter of typhoidal ulcerations. Now in Dr. Lyman's case the disease from its earliest manifestations lasted only about two months, and it seems hardly possible that the anatomical lesions characteristic of typhoid and severe enough to infect the system with so general a tuberculosis could have wholly disappeared in so short a time.

DR. LYMAN said that he supposed that a latent tuberculosis might be developed by the febrile condition.

DR. GANNETT answered to a question of Dr. Doe, that the oldest signs of tubercle were in the uterus, from which the disease had penetrated through the tubes to the peritonæum. The ovaries had become adherent to the intestine. Tubercle existed all over the peritonæum, but he found no evidence of it in the mucous membrane of the intestine. It was found in the pleura, which it had possibly reached through the diaphragm, and also in the brain.

DR. GEORGE B. SHATTUCK said that he had seen Dr. Lyman's patient several times at the City Hospital, when the diagnosis of typhoid fever had been suggested. Considering the whole history of the case in the light thrown upon it by the autopsy, he thought acute miliary tuberculosis a sufficient explanation without the addition of typhoid fever. The general subject and the case itself were both of much interest, and he was glad Dr. Lyman had brought them before the Society.

The presence of nodules of caseous metamorphosis in the lungs and intestinal glands, as well as in the lining membrane of the uterus, as reported in the full record of the autopsy, would seem to indicate an older process preceding the acute attack; an assumption favored by the family history, and in accord with the theory attributing the origin of acute tuberculosis in many cases to auto-inoculation from such points of caseous degeneration. On the other hand, it was undoubtedly true that acute tuberculosis did at times present itself in individuals apparently enjoying good health until thus attacked, and neither anæmic nor debilitated. The tendency to regard cases of acute tuberculosis as typhoid fever was not only common, but natural, and often unavoidable. The chart in Dr. Lyman's case illustrated to some extent a point in the differential diagnosis suggested by Wunderlich, which was also shown by a clinical chart of a patient under Dr. Shattuck's care at the City Hospital two years before, which he passed around. That case had been supposed to be probable typhoid until the diagnosis of

acute tuberculosis was established by the autopsy. The point alluded to was the disproportion between a very rapid pulse and respiration, and a comparatively low range of temperature,—between a pulse ranging from 120 to 160, with a respiration from 30 to 50, and a temperature not rising above 103° F., or 103.5° F. The higher temperatures in the reported case apparently corresponded with periods when rupture took place into the intestine.

DR. E. G. CUTLER thought that little remained to be said after the previous remarks. To one unfamiliar with the details of the case a diagnosis of primary tuberculosis would seem more natural than one of typhoid fever with the latter as a sequence. As has been stated, the differential diagnosis between the two diseases was oftentimes most difficult. A case had occurred to him at the Carney Hospital where typhoid fever was at first diagnosticated, but persistence of the fever and irregularity of the symptoms forced a change in diagnosis to tuberculosis, and an autopsy proved the correctness of the subsequent view. While a house officer at the Massachusetts General Hospital he had seen a similar case.

DR. H. I. BOWDITCH said that he had never seen miliary tuberculosis follow undoubted typhoid, so far as he remembered. He had seen it in doubtful cases. He spoke of the importance of inquiring into the early history at a first examination; especially as to previous health and the presence or absence of cough. Also of the importance of the physical examination of the lungs, and of the rate of the pulse. He thought there was a tendency to make the diagnosis of typhoid unwarrantably, it being one of our prominent diseases.

DR. GEORGE C. SHATTUCK said: This report is a very interesting one, as many questions of importance are raised. The diagnosis between typhoid fever and tuberculosis has seemed to me at times difficult. And yet in their ætiology they differ. Ought we not to look upon typhoid fever as the manifestation of a zymotic poison, the action of which in the different organs and functions differs in individual cases. True, the lesion of Peyer's patches is regarded as the anatomical characteristic; the disease is sometimes called enteric fever; and yet must we not give the name of typhoid when this lesion is not found after death, and when there are no symptoms of abdominal disease during life? The so-called typhoid symptoms are those of septicæmia. In many, and we may say in most, cases there is destruction of tissue by ulceration, and dead animal matter lies in proximity to veins and absorbents. Are not relapses in typhoid fever due to septicæmia?

Then tuberculosis is a constitutional disease, attended in some cases with dothineritis, in others with pulmonary lesions, from which animal poison readily enters the blood. The anatomical characteristics of tuberculosis are found in different parts and organs, whose functions are variously interfered with. I had a case of tuberculosis many years ago where the symptoms were those of marasmus and dyspepsia, where typhoid fever was never suggested, and where no ulcerations were found after death. I have now a patient under treatment where the diagnosis is tuberculosis, and diarrhoea has been a prominent symptom, but where typhoid fever is not suspected.

I should regard the case reported as one of tuberculosis, though I am not surprised that others are disposed to refer some of the symptoms to typhoid fever,

nor that the diagnosis of typhoid fever was made when the patient entered the hospital.

DR. G. B. SHATTUCK, replying to Dr. Bowditch, called attention to the fact that in acute tuberculosis pulmonary signs are either conspicuous by their *absence* or represented merely by a short cough, most noticeable in the early part of the attack, whereas the bronchitis of typhoid fever comes at a later period. Hospital patients, it should be remembered, are, generally, not seen in the first days. In his own case, previously referred to, there was a complete absence of physical signs in the chest. A differential diagnosis between a typical case of typhoid and a typical case of acute tuberculosis should be easy, but typical cases of disease existed rather in the books than in the wards, and certainly a typical clinical picture of typhoid fever was the rare exception. There may be diarrhoea in tuberculosis and constipation in typhoid fever; abdominal tenderness and a moderately enlarged spleen in each; and Bartholow, as well as Jaccoud, speaks of an occasional eruption, not unlike the roseola of typhoid, as having been observed in acute tuberculosis.

As to duration of disease, referred to by Dr. Gannett, tuberculosis may last any length of time, from two weeks to eight, and typhoid fever the same. Flint mentions only one case of tuberculosis in his experience with so short a duration as eleven days.

DR. LYMAN was of the opinion, with the previous speaker, that the typhoid fever of the books is the exception in the wards. It is by no means unusual to see a dozen cases together without a dry tongue. A typical temperature chart is a rare thing, although it is always ground for suspicion if we do not get regular remissions during the first few days. More often we get the peculiar exaggerated remissions toward the close. Constipation is not uncommon. Rose spots may be absent. In the reported case the lungs had been examined when she entered the hospital, with negative results. It was not until the last few days that friction sounds were heard in the pleura. Unless Dr. Gannett could say that tuberculosis was of too old standing, he did not see why it could not be developed by typhoid. We know how typhoid does develop previously latent diseases. As to the absence of anatomical lesions, we have no opportunity to verify the diagnosis of abortive typhoid by post-mortem examination, because the patients get well. He could not see why if changes occur in the follicles in cases of mild typhoid, not resulting in ulceration, they might not be absorbed.

DR. GANNETT said that the use of the term typhoid depends on whether we adopt a symptomatic or an anatomical nomenclature, and that the anatomical classification, while open to objection, has been generally accepted as the best practicable. Granting this, typhoid is a disease of Peyer's patches and the solitary follicles. Allow that most of the products of disease may be absorbed, and assume that there are no cicatrices, there still remain the so-called shaved beard appearances, small areas of pigment that remain through life even after the intestinal catarrh of children.

In answer to Dr. Lyman, Dr. Gannett quoted the statement of Virchow, made four years ago, that the diarrhoea of typhoid depends on catarrh of the mucous membrane of the intestine, and has nothing to do with ulceration. Dr. Gannett said, in closing, that one point in diagnosis is the presence of tubercle in the choroid of the eye, which, however, is by no means constant.

DR. G. B. SHATTUCK asked Dr. Gannett whether he regarded the presence or absence of the intestinal appearances alluded to as being sufficiently specific and constant to justify testimony in a court of law as to an individual's having been or not been attacked with typhoid fever at any period previous to death, however remote.

DR. GANNETT answered that if absolutely nothing were found he would not be justified in denying that a mild typhoid had existed at some previous time, because it is possible the contrary may sometime be proved.

DR. A. H. NICHOLS spoke of the analogies and differences between the typhoid state which accompanies several distinct diseases and the specific disease known as typhoid fever. He had observed, during a period of years at the sea-shore, a considerable number of severe illnesses, the result of septic infection induced by drinking water contaminated with faecal matter, where the symptoms were of a typhoid character. As in typhoid fever, there was a prolonged period of incubation, followed by continued high fever, prostration, insomnia, headache, with dry, brown tongue, and occasional ecchymosis. Instead of diarrhoea, however, there was usually constipation, while the characteristic thermal curve pointed out by Wunderlich, as well as the so-called rose spots, were invariably absent.

The well-known causes of infection in these cases, as well as their uniform clinical history, all indicated the diagnosis of an artificial *septic fever*, having no real connection with true typhoid fever.

Recent Literature.

On the Treatment of Wounds and Fractures. By Sampson Gamgee, F. R. S. E. Philadelphia: P. Blakiston, Son & Co. 1883.

This second edition of Mr. Gamgee's Clinical Lectures contains the substance of his work on the Treatment of Fractures, 1871, and on the Treatment of Wounds, 1878.

Mr. Gamgee preaches that cleanliness, exact coaptation of parts, and efficient immobilization are the important aids which a surgeon can afford to wounded tissues, whether soft or bony, and that protection from atmospheric or other germs is a matter of little importance.

The value of compression and fixation in restraining and dissipating inflammatory conditions is constantly urged and illustrated.

The simplicity of the treatment advocated is certainly a great and evident recommendation. Mr. Gamgee's dressing materials are styptic colloid to check oozing, absorbent cotton to provide for elastic pressure and to absorb discharges, strips of mill board to secure fixation and equalize pressure, and a roller of absorbent cloth to fix cotton and board in place. With these materials he treats compound fractures of the most serious nature, and, to judge from the illustrative cases, with excellent success.

The book will bear very careful reading, which indeed its interest invites, and the student cannot fail to get much valuable suggestion from it.

In regard to Mr. Gamgee's attitude towards anti-septic surgery some exceptions may be taken. He seems to fall into the error of confounding the use of

carbolic acid in wounds with the practice of antiseptic surgery, and while criticising the use of strong antiseptic washes, and expressing dissent from the idea that it is necessary to guard against the entry of germs from the air, he appears to overlook the antiseptic character of his own dressing.

The thorough application of styptic colloid or compound tincture of benzoin to a wound which is then immediately covered with absorbent cotton (the most efficient protection possible against outside impurities) is certainly a decidedly antiseptic procedure, and the successful treatment of wounds in this manner does not offer very convincing evidence of the innocuousness of atmospheric germs.

Enteric Fever, its Prevalence and Modifications; Ætiology; Pathology and Treatment: As Illustrated by Army Data at Home and Abroad. By FRANCIS H. WELCH, F. R. C. S., Surgeon-Major. Philadelphia: Presley Blakiston, Son & Co. 1883.

Surgeon-Major Welch, of the British army, received the Alexander Prize in 1881 for an essay of which this book is a modification. Army surgeons undoubtedly enjoy certain advantages in the study and observation of some diseases which are not possessed by the medical man in civil practice, even when attached to a hospital. The antecedent and immediate surroundings and conditions to which soldiers have been or are exposed can often be more accurately defined than this can be done for the civilian population, and the same material may be studied by the same observer under varying conditions. This is especially true of such a disease as typhoid fever, as manifested among British troops at the different stations which they occupy in all parts of the world. The intelligent and zealous army surgeon may find here a field in which his spare hours can be spent to his own satisfaction and to the profit of medical science.

The present book is an octavo volume of nearly two hundred pages, with table of contents and index. The army statistics of typhoid fever embrace those of the British islands and of twenty-two foreign and colonial countries in all parts of the world, from 1860 to 1878, inclusive. The writer's figures and observations seem correct and careful, and not elaborated in support of a preconceived theory, and his conclusions we believe are sound. More than one half of the book treats of the ætiology of typhoid fever, and the writer's material leads him, as it must help to lead the reader, to the legitimate conclusion that the disease is a specific one, having its own specific poison.

We quote the following paragraphs from the last page of this section: "Let any individual cognizant of the disease in one country place his observations against others in other climates and sections of mankind; let him compare the results of diseased action, derived from different countries and at different times by different observers; and then putting all theory aside let him ask himself the question, is it within the range of experience, probability, or possibility, for such identical structure lesions to have been brought about by several and dissimilar causes? There can be no doubt of the answer to a question under like conditions in the physical, animal, and vegetable world. Hence, then, the conclusion arrived at is, that the specific theory more closely embraces the military data than any

other, and is the only one which meets the requirements of the facts."

Such a view of the ætiology is supported by the pathology, which offers the same manifestations in all countries under the most varied influences of soil and climate.

Dr. Welch remains a disciple of the expectant treatment, the treatment of symptoms as they arise in the individual case. He is a strong advocate of the disinfection of stools, but believes it to be insufficient as ordinarily attempted with such agents as carbolic acid and chloride of zinc, and advises the application of a high temperature as the only reliable germ destroyer.

Types of Insanity. An Illustrated Guide in the Physical Diagnosis of Mental Disease. By ALLAN McLANE HAMILTON, M. D. New York: William Wood & Co. 1883.

This book is made up of two parts, the first one being a description of physical appearances, conditions, and symptoms manifested in the insane, as well as a description of the proper method of examination of insane persons and abstracts from the lunacy laws of various states; and the second one a series of ten illustrations, all but one representing "types of insanity."

The author is evidently a devout believer in the physical theory of insanity, even going as far as to say that "Disease of the brain makes itself known by well-marked bodily symptoms, that are in themselves almost as important as the many variations of disordered mental action." The reviewer would be the last person to underrate the importance of bodily manifestations in mental disease, but at the same time sees no reason or occasion for regarding many of them as anything more than "variations of mental action."

The first part of the book is written in a light and sketchy manner, being little more than an outline of the subjects which it treats. It would have made the work more valuable to have omitted the chapters on Examination of Insane Persons, and Abstracts of Lunacy laws, and have devoted the space and time consumed in their preparation to the elaboration of the first chapters.

The second part is decidedly the best. The "types of insanity" are some of them really types, such as the idiot, for example. Others no doubt represent typical cases of mental disease, but have nothing in their appearance to distinguish them from types of sane faces. Plate IX. represents the face of a general parietic "demented and stupid." It looks to the writer like the face of an intelligent young laborer in robust health. Plate VIII. represents the face of a dement, "dirty, stupid, and careless." It would pass very well, however, for a picture of Napoleon we have seen, which portrays the hero buried deep in thought and in his coat collar. Almost all of the other faces in the plates look like those of lunatics or criminals, but it would be almost impossible to say exactly *what* forms of insanity they stand for.

Though it is a little difficult to understand the precise object of Dr. Hamilton's book, which is too full of elementary details for the specialist, and not full or thorough enough for the student in any particular, we nevertheless are glad to welcome it, as it indicates a desire on its author's part to throw additional light on that least understood of all diseases, — insanity.

A Treatise on the Diseases of the Nervous System. By JAMES ROSS, M. D., LL. D. Second Edition. 2 vols. New York: Wm. Wood & Co. 1883. Pages xxi., 1028, ix., 1047.

A second edition of this treatise has appeared very soon after the first. The work has been enlarged by nearly five hundred pages. As the author says, every page seems to have been subjected to careful revision; some parts of the old edition have been abridged, much new matter has been added, copious references to authorities and other authors have been inserted, adding much to the value of the work.

Under General Symptomatology the subject of Sensations is more fully elaborated, also several portions devoted to considering motor mechanisms.

The section in which the Deep Reflexes is considered has been rewritten, the patellar tendon reflex (called now "knee jerk") is no longer considered to be a true spinal reflex, but, taking the view advanced by Westphal in his later writings, it is referred to a local action upon the muscle; and the reaction is thought not to occur unless a certain degree of *tonus* is maintained in the muscle, and the reflex influence is necessary for the maintenance of this condition.

A subsection on Progressive Multiple Neuritis has been added. This, though short, gives a very good description of the affection, which has lately attracted considerable notice.

Much new matter has been added to the section on Diseases of the Ocular Motor Nerves, making that section more complete and valuable.

In the clinical portion of the work the most extensive addition has been made to Spastic Hemiplegia of Infancy and Athetosis; a description of Spasmodic Paraplegia of Infancy is given. Most of the additional matter in this section is reports of cases.

The above are the more extensive and important changes. The work can be recommended more especially for its careful review of the anatomy and physiology of the nervous system. As a whole it has the same excellences as the earlier edition, and there are fewer defects.

Elements of Histology. By E. KLEIN, M. D., F. R. S., Joint Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London. Illustrated with 181 engravings. Philadelphia: Henry C. Lea's Son & Co. 1883.

We are much disappointed to find that this little book contains nothing on the preparation of the tissues. It is full of wood-cuts taken from the author's Atlas of Histology and Handbook for the Physiological Laboratory, with many additional cuts. It is a very good compendium of histology.

Sea-Sickness: its Cause, Nature, and Prevention without Medicine or Change in Diet. By WILLIAM H. HUDSON. Boston: S. E. Cassino & Co. 1883.

This little book is written in a pleasing style, and furnishes many interesting reminiscences of the author's life on land and sea. To the physician it offers little of interest beyond adding one more to the long list of remedies, each of which has proved successful in the hands of its discoverer. The remedy consists

in the perfect relaxation of the muscles. The writer states that previous treatises on sea-sickness afford no light nor guide upon the subject. It is to be feared that his own work must be placed in the same category. Certainly any and all of the theories previously offered are more satisfactory than one which would locate the disturbance in the voluntary muscles. The physiological arguments upon which the remedy is based are extremely fanciful, but its efficacy is easily tested by experiment.

How to Examine the Chest. A Practical Guide for the Use of Students. By SAMUEL WEST, M. D., Oxon., M. R. C. P., Physician to the City of London Hospital for Diseases of the Chest, etc. Philadelphia: Blakiston, Son & Co. 1883.

This little book contains the substance of lectures delivered by the author at St. Bartholomew's Hospital, during the course of the demonstrations, which it has been his duty as medical tutor to give to the students during the last few years, by way of preparation for clinical work in the medical wards.

In it will be found a clear, concise statement of what is necessary for a proper examination of the chest. The nomenclature is simple, as it always should be in any elementary treatise on auscultation and precussion, and all discussion of theories of sound-production have been omitted. The sphygmograph receives due consideration, and the manual as a whole is certainly a very good one.

The Treatment of Wounds. By LEWIS S. PILCHER, A. M., M. D. New York: William Wood & Co. 1883. 391 pages.

In this volume of Wood's Library of Standard Medical Authors Dr. Pilcher gives quite a thorough description of the modern treatment of wounds, considering not only dressings proper, but also the methods of investigating wounds, of arresting hæmorrhage, and providing for rest of the injured parts.

The principles of treatment advocated are those of the modern antiseptic school, and several of the methods in use are described, and the range of usefulness of some of the usual antiseptic preparations is considered.

The strictly absorbent dressings, which without antiseptic properties act by their power of keeping the wound dry and removing from it the fluids which if left might putrefy, are passed over lightly.

Without containing anything of importance which is new, this book furnishes a convenient résumé of surgical wound treatment of the present day, which, however, will soon be much modified if the present rapid progress in this branch of our art continues.

—Johns Hopkins University has provided itself with a new gymnasium, which was lately opened to the students and the public by cards of admission. The promotion of physical culture will be a part of the regular collegiate course. Dr. E. Mussey Hartwell, who is in charge of this department, delivered an address on Physical Training in Colleges and Universities.

Medical and Surgical Journal.

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ANNUS MEDICUS.

In looking back over the year 1883 one finds it not to have been an especially eventful year medically. As usual, a vast deal of medical literature has been printed, and, as usual, a very modest proportion thereof seems likely to be of permanent value. As usual, many new remedies have made their appearance, of which the majority will be weighed in the balance and found wanting. And yet the year has doubtless left the profession, on the whole, wiser than it found it. The eminent national societies, the American Surgical at Cincinnati, the Medical at Cleveland, the Neurological and Laryngological in New York, the Dermatological at Lake George, the Ophthalmological at Kaaterskill, the Gynecological at Philadelphia, the American Academy of Medicine in New York, have met and collected their observations, and countless less celebrated bodies throughout the land have doubtless borne good fruit in the truthful record of patient investigations. The fifty-first annual meeting of the British Medical Association, in August, at Liverpool, and the first annual meeting of the Intercolonial Medical Congress at Amsterdam, in September, deserve mention, as does the International Hygienic Exhibition held at Berlin during the summer, and postponed from last year on account of the destruction then of the building by fire.

Among the annual courses of lectures in England which have come to be looked to for the freshest and most authoritative presentation of medical knowledge on the subjects that they discuss, we have had during the past year the Gulstonian Lectures on Sterility in Woman, by Dr. J. Matthews Duncan; the Croonian Lectures on Modern Theories and Treatment of Phthisis, by Dr. James Edward Pollock; and the Lumleian Lectures on Uric Acid, its Physiology and its Relation to Renal Calculi and Gravel, by Dr. A. B. Garrod, all delivered before the Royal College of Physicians, London; the Lettsomian Lectures on the Treatment of Some Forms of Valvular Disease of the Heart, by Dr. A. E. Sansom, before the Medical Society of London; the Hunterian Oration before the Royal College of Surgeons of England, by Sir T. Spencer Wells. The Cartwright Lectures in New York were delivered by Dr. W. T. Belfield, of Chicago, On the Relations of Fungi to Disease.

A Collective Investigation of Disease has been organized under the auspices of the British Medical

Association, a movement from which some positive addition to our knowledge may reasonably be anticipated, and in which it is desirable that the American Medical Association and the State societies should cooperate.

The "irrepressible conflict" between Gaul and Teuton has appeared in the field of science in an acrimonious discussion, which began last year at the Geneva meeting of the International Congress of Hygiene, between the young pathologist of Berlin who gave us the tubercle bacillus and the old chemist of Paris who has been inoculating thousands of his countrymen's cattle against anthrax. Koch denies that the methods used by Pasteur in his culture experiments give sufficient guarantees that the microbes cultivated, attenuated, and introduced into new animals were simply and solely what Pasteur believed them to be. He went so far as to intimate that the inoculated animals in many cases died of a mere septicæmia. On the one ground of anthrax, where Pasteur's results seemed most impregnable, the German did not hesitate to assail him, somewhat rancorously it may be said, and claimed that a first inoculation with attenuated virus did not protect against the second and test-inoculation, nor against a subsequent spontaneous taking of the disease. Pasteur's reply and Koch's rejoinder, with their several successors, have occupied those medical journals given to polemics.

Later, Spina and Stricker, of Vienna, entered the lists against Koch, claiming that the bacilli which Koch considered peculiar to tuberculosis were indistinguishable from other bacilli which, when similarly treated, would take the same stain. Spina even went so far as to deny any infectious character whatever to phthisis, and altogether appeared to be quite a radical *microboclast*.

The net results up to the present moment may be summed up as an increased confidence in Koch's methods of experimentation and investigation, and a consequent disposition to give his results respectful and careful consideration if not immediate acceptance. On the other hand, Pasteur's methods have been discredited, and a justifiable suspicion thrown upon his conclusions.

Both the German and French governments sent Commissions to Egypt to study cholera, Koch being at the head of the former, and accompanying it in person, whilst Pasteur assumed the direction of the latter, and was represented upon it by his young and accomplished assistant, M. Thuillier, who, as our necrology shows, fell a martyr to his scientific zeal at Alexandria. The Commissions each reported to its respective government. Each found a microbion, as bound in honor to do, but neither succeeded in proving its own discovery to be the cholera germ. The German micro-organism is a bacillus found principally in the walls of the lower part of the small intestine. The French micro-organism, as stated by M. Straus, of the Commission, was found in the blood, and is described as a very minute, elongated body, suggesting that of the acetic ferment or of pig cholera, though less elongated, and located in the clear spaces between

the blood globules. The determination of an acid reaction of the blood was also announced. The French Commission has returned home; the German, with the consent of its government, continued on to Bombay to follow up its investigations upon more ample material. Of its subsequent results nothing is known as yet.

During most of the earlier half of the year public attention was occupied by the attempts of his excellency, the Governor of this State, in a protracted series of legislative hearings, to impugn the management of the charitable institutions, and indirectly to expose the cause of medical education to popular odium by charging various indecencies and outrages in connection with the delivery and dissection of bodies of paupers. The majority of the committee reported that the Governor's charges were not established, and the shaft aimed at the Harvard Medical School over the Tewksbury almshouse fell harmless to the ground. Coincidentally (at least in point of time) with this agitation the new building of the School was injured by fire to the extent of several thousand dollars. The fire-proof character of the edifice restricted the damage chiefly to the internal finish, but a delay of some three months was necessitated for its restoration. The ceremonies on the occasion of the dedication and occupation of the building are fresh in the minds of all, as is also the vigorous defense then given by the Emeritus Professor of Anatomy of the conduct of the anatomical department in all its work during the many years he had had charge of it.

As in the previous year, New York has been the centre of Code controversy. In April the New York Academy adopted a resolution offered by Dr. Austin Flint, Jr., directing that none but supporters of the Old Code be eligible for the Academy. Reconsideration was moved by the Old Code men, and voted down with the view of "clinching" the position of the Academy. An adjournment under suspension of the By-Laws till October was made, when amendments offered by Dr. Barker, and designed to remove further discussions of this topic from the meetings of the Academy, failed of the two-thirds vote necessary to their passage. The New Code men, however, succeeded in carrying a motion rescinding the action of the Academy taken in the spring, so that the question is now, so far as that body is concerned, *in statu quo*. The New York delegates to the Cleveland meeting of the American Medical Association were not received on account of the attitude of the State Society on this question. No considerable gain has been made by either party to this dispute during the past year, and the question is one that threatens to continue to divert to itself time which could be spent much more profitably on scientific work.

To the Epidemiography of the year a good deal of interest attaches. At home our Southern border has been threatened at various points by yellow fever, a lodgment of which disease was happily averted everywhere except at the Navy Yard Reservation near Pensacola. The report of the Court of Inquiry convened by order of the Secretary of the Navy states

that the first case was observed August 3d, and suggests four possible sources of infection. A strict cordon was drawn around the infected district, and maintained until November 1st. The disease was confined to the Reservation and two small villages.

Yellow fever has been quite active in Havana the past summer. There were 152 deaths during the month of August, and eighty-six deaths during the month of October. Vera Cruz was also visited, and several towns along the Pacific coast and the Gulf of California, especially Guaymas, the termination of the Sonora branch of the Atchison Railroad, where the mortality was very large, continuing through the month of October. The type of the disease at this point exhibited some peculiarities.

The same good fortune or good management which has granted the United States an immunity from yellow fever has preserved the Continent of Europe from an invasion of cholera, notwithstanding the epidemic outbreaks in Egypt, in India, and China. The epidemic in Egypt was on an extensive scale, the number of deaths reported being between twenty-five and thirty thousand. The outbreak began at Damietta, a city of the Delta, the hygienic conditions of which were reported as exceptionally bad, even for an Oriental city. The disease spread rapidly throughout this town, and during the few weeks of its duration swept away about one fifteenth of the population. A cordon was established around the town after the disease had prevailed some time, but naturally without avail, and the epidemic spread rapidly to Cairo and the valley of the Nile above the capital.

The source of the outbreak at Damietta remains undecided, notwithstanding much discussion and many reports on the subject, but we need not on that account be driven into embracing a belief in a *de novo* origin. Equally fruitless seem to have been the somewhat warm discussions as to the value of quarantine against the disease. England continues to occupy one position on this question and the Continent another, and we must still revert to the Vienna Congress. No new and effective treatment of cholera has been brought to light that we are aware of.

GENERAL NECROLOGY.

Dr. George M. Beard, of New York, died on January 23d, at the age of forty-four. He devoted himself specially to nervous diseases, and was a voluminous and original writer.

Prof. Charles Sédillot, for many years Director of the Military Medical School of Strasbourg, died on January 25th.

Professor Von Sigmund, Professor of Syphilis in Vienna, died February 1st, in the seventy-fourth year of his age.

Prof. Carl Von Hecker died in his fifty-sixth year; he was Professor of Obstetrics in Munich.

Baron Jules Cloquet died on February 23d, at the advanced age of ninety-four. He was the author of several works on anatomy and surgery.

Prof. William Holme Van Buren, of New York, died March 25th, at the age of sixty-four. Professor

of Surgery at the Bellevue Hospital Medical School, he was best known perhaps as the author of a work on Diseases of the Rectum, and joint author with Dr. Keyes of a Treatise on Genito-Urinary Surgery. His work on the Sanitary Commission is a matter of public as well as of medical interest. To the great detriment of his private revenue he served his country faithfully upon this Commission and added largely to the efficiency of the sanitary conduct of the war.

Professor Von Bruns, of Tubingen, died in March. He was born in Brunswick in 1812, and was the author of several surgical treatises. His work on Laryngoscopic Surgery gained for him a grand prize of 20,000 marks offered by the Academy of Turin.

Dr. William Farr, C. B., died April 14th, at the age of seventy-five, to whom is due almost all our present knowledge of vital statistics.

Robert Druiitt, M. D., F. R. C. S., author of the well-known Surgeon's Vade-Mecum, so long the surgical text-book of the Harvard and other medical schools, died on May 15th, aged sixty-nine.

Dr. Filippo Pacini, born at Pistoia, May 25, 1812, died at Florence, July 9th, at the age of seventy-one. He was perhaps the most distinguished and widely known of contemporary Italian physicians. Professor of Descriptive, Topographical, and Artistic Anatomy at Florence, and author of a large number of papers on a variety of subjects, his memory will be most generally associated with the discovery of the minute bodies known by his name.

Dr. A. P. Stewart, F. R. C. P., London, died in London July 28th, at the age of seventy. His name will be associated with a paper, published in the *Edinburgh Medical and Surgical Journal* in 1840, on The Differentiation of Typhoid from Typhus Fever. Dr. Stewart subsequently made some claims to priority in the statement of this differentiation, at least in England.

Professor Parrot died at Paris, August 5th, at the age of fifty-four. He was Professor of the History of Medicine at the Paris School, and chief physician to the National Hospital of the Legion of Honor. He made some important contributions to the pathology of children's diseases, indicated by the expression "Parrot's bumps."

Prof. N. A. Pedicino died at Naples in August, at the age of forty-four. He had already been six years Professor of Botany at the Sapienza, University of Rome. He was an advanced advocate of Darwinism.

Robert Boyd, M. D., F. R. C. P., London, etc., etc., died August 14th, at the age of seventy. He lost his life, as did one of his sons, whilst striving to save patients from the flames of his private lunatic hospital. His end was gallant as his life had been useful. He was the author of many important papers relating to his branch of medicine, among which that on the Weight of the Brain at Different Ages and in Various Diseases is probably the most widely known.

Henry J. H. Bond, M. D., died in September, at the age of eighty-two. He was formerly Regius Professor of Physic at Cambridge, England.

Louis Thuillier, M. D., died of cholera at Alexan-

dria on September 18th, at the age of twenty-seven. He was the assistant of Monsieur Pasteur in his laboratory at Paris, where he took an important part in the researches upon *charbon, rouget* of pigs, and the so-called typhoid fever of horses. He went to Egypt at Pasteur's request as a member of the French Commission to Investigate Cholera, and died one of the last victims to the disease at Alexandria.

Dr. James A. Sewell, of Quebec, aged seventy-three, Dean of the Medical Faculty of Laval University, died on October 2d.

Charles H. Crane, Surgeon-General U. S. A., died October 10th, in Washington, aged fifty-eight, after a brief service as surgeon-general of one year and two months.

Francesco Cortese died October 25th, at Rome, aged eighty-two. He was formerly Surgeon General of the Sardinian army.

Prof. J. A. H. Depaul died at Paris in October, at the age of seventy-two. A distinguished obstetrician, and at one time President of the Académie de Médecine, he was the author of a treatise on Obstetrical Auscultation.

James Shuter, M. B., F. R. C. S., died November 1st in London, aged thirty-seven. He was Assistant Surgeon to the Royal Free Hospital and to St. Bartholomew's Hospital. Mr. Shuter was a careful and accomplished surgeon who had particularly endeared himself to his associates and his students, to whom he devoted much time and labor. He died from an overdose of morphia. While taking a hypodermic injection the vial containing the morphia solution was broken and the solution poured into a glass resembling one that contained a saline mixture. These mixtures were alike in color and quantity. It was supposed that while semi-unconscious Mr. Shuter reached from his bed, took up the wrong glass, and drank the morphia solution.

John Macnaught, of Liverpool, died November 3d, at the age of ninety years. Though for a few years retired from practice, he had continued in actual practice for sixty-five years. He took his degree of M. D. in 1815.

Dr. J. Marion Sims died at New York November 13th, at the age of seventy-one. His name is identified with the speculum which he invented, with the use of silver wire sutures, and with the treatment of vesico-vaginal fistulæ. The first account of his operation for fistulæ was published in January, 1852. He was President of the American Medical Association in 1876, and founder of the New York Hospital for Women.

Charles Hilton Fagge, F. R. C. P., died in London on November 15th, aged forty-five, of aneurism of the aorta. Physician to Guy's Hospital, he also held appointments at different times as Lecturer in Hygiene, Physics, and Materia Medica. He was the editor and translator for the New Sydenham Society of Hebra's *Exanthemata and Diseases of the Skin*, and was the author of numerous articles, among which may be mentioned those on Intestinal Obstruction and The Murmurs attendant on Mitral Contraction, in Guy's Hospital Reports of 1869 and 1871. He also studied

deeply and wrote somewhat extensively upon physiological tests as a means of detecting poisons.

Prof. G. B. Ercolani died November 16th, at Bologna, at the age of sixty-four years. Of an ancient and noble family, he developed an early and deep interest in comparative anatomy and pathology. During the events of 1849 he was a strong liberal in politics. Most of his publications have appeared in the *Memoirs of the Academy of Bologna*. His great work on the *Histology and Physiology of the Placenta of Mammals* was rendered into English by Dr. H. O. Marcy.

Dr. Thomas Story Kirkbride, M. D., Superintendent of the Pennsylvania Hospital for the Insane, died in Philadelphia, December 17th, at the age of seventy-four. Dr. Kirkbride's name has been associated with the study of insanity for over fifty years, and he has been at the head of the insane department of the Pennsylvania Hospital since 1840. He was one of the founders and for eight years President of the Association of the Medical Superintendents of America.

NECROLOGY OF MASSACHUSETTS MEDICAL SOCIETY.

The following members of the Massachusetts Medical Society have died during the year. For the list we are indebted to the kindness of Dr. F. W. Goss, the Secretary of the Society:—

January 16th, Walter Burnham, of Lowell, aged seventy-five.

February 22d, Joseph Nye Bates, of Worcester, aged seventy-two.

February 25th, Jeremiah Joseph McCarthy, of Charlestown, aged thirty-five.

March 1st, William Marshall Parker, of Milford, aged fifty-four.

April 11th, Daniel Holt, of Lowell, aged seventy-three.

April 26th, Clement Adams Walker, of Boston, aged sixty-two.

May 2d, James Otis Parker, of Shirley, aged seventy-one.

May 10th, Edward Julius Sawyer, of Gardner, aged fifty-three.

May 15th, William Henry Prince, of Newton, aged sixty-seven.

May 25th, Daniel Thompson, of Northampton, aged eighty-three.

June 26th, Jefferson Pratt, of Hopkinton, aged eighty.

June 28th, Edward Mead, of Roxbury, aged sixty-four.

July 8th, Erastus Otis Phinney, of Melrose, aged seventy-three.

August 19th, George Grenville Tucker, of Westfield, aged forty-nine.

August 23d, Horace Poole Wakefield, of Leicester, aged seventy-four.

September 30th, James Aloysius Fleming, of Boston, aged thirty.

October 3d, George Jerome Arnold, of Roxbury, aged forty-eight.

October 20th, Samuel Eaton Fitz, of Roxbury, aged forty-seven.

October 23d, Robert Dwyer Joyce, of Boston.

October 29th, Alba Enoch Kemp, of East Douglas, aged sixty-one.

November 7th, Joseph Allen Fay, of Milford, aged thirty-nine.

November 12th, Marshall Spring Mead, of Northfield, aged eighty-one.

November 15th, Simeon Parker Dresser, of Hinsdale, aged thirty-eight.

December 8th, Friend Drake Lord, of Newton Lower Falls, aged sixty-two.

December 14th, Calvin Ellis, of Boston, aged fifty-seven.

MEDICAL NOTES.

— It appears that the suggestion of General Howard to "brand" deserters, which has excited so much indignation on the part of the public press, was totally misapprehended. The recommendation actually made was that after a first offense a distinctive mark should be tattooed (not branded) into the skin at some part covered with clothing so that the offender should not be allowed to reënlist.

— The position of surgeon-general on the staff of Governor Robinson was tendered, it is understood, to Hon. Samuel A. Green, M. D., of Boston, who declined the honor on account of professional and personal engagements, and because of his intention to spend a considerable portion of next year abroad. Dr. Alfred F. Holt, of Cambridge, has been appointed to the position.

— At a recent meeting of the Pathological Society of New York a specimen was exhibited by Dr. B. Robinson consisting of a heart from an individual six feet four inches tall, and of corresponding proportions, who had suffered for years from symptoms of disturbed circulation. The organ weighed fifty-five ounces, and was believed by Dr. Robinson to be the largest on record. The president, however, cited one formerly presented to the Society by Dr. Clark, which weighed fifty-seven ounces.

— We find the following interesting bit of pathology among the suburban items of a daily contemporary: "The death by pneumonia of an infant child of Richard Sanderson was caused by a raw bean which the child had swallowed, and which sprouted in the stomach."

— An attack has been made in the columns of the *Standard* newspaper of London on Drs. Ringer and Murrell for illegal experimentation on patients by means of sodium nitrite. The facts on which the charge was made were obtained from the publication of results by the gentlemen themselves. While it is, perhaps, not to be wondered at that the lay press should misinterpret such experimentation, it is cause for surprise and regret that such an attack should receive any aid from the medical profession either by individuals or the professional press. The *Medical Times and Gazette* has editorially condemned these gentlemen for researches of a character necessary to be made before valuable scientific progress in therapeutics can be secured.

— Garcia (*London Medical Record*, October 15th) recommends a useful modification of Boyer's method for the reduction of paraphimosis. He begins by applying over the whole member, from vertex to base, a spiral bandage, narrow and wet with cold water, the patient being told to continually pour a stream of cold water over the affected part. After five minutes the bandage is taken off and replaced rapidly by another in the same manner, but tighter; the irrigation is continued. After five more minutes the second bandage is taken off, and a third is applied still more tightly. After a little time we may proceed to the reduction by the ordinary method, seizing the member with the index and middle finger of each hand, and pushing the glans with both thumbs. Reduction is generally easy. The number of times that the bandage must be applied depends naturally on the amount of tumefaction and the effect obtained by each application.

— Professor Von Ziemssen employs distention of the large intestine by carbonic acid gas as a means both of diagnosis and of treatment (*Wien. med. Blätter*, July 19th). His method of introducing the gas is by passing into the intestine, through a tube about six inches long, about 300 grains of bicarbonate of soda and 270 grains of tartaric acid, which is sufficient to produce ten pints of gas. The distention serves to indicate the form and position of the intestine, with its relations to neighboring organs and the condition of its valves. It is said to be therapeutically useful to excite peristaltic action, when a somewhat smaller amount may be used, and for relieving malposition and obstruction. It is more efficient and less harmful than distention by means of water or other fluid, and although the breaking down of adhesions may cause pain inflammation does not follow. The only cases in which it is contra-indicated are enteric fever and intestinal tuberculosis.

— The new edition of *The Medical Register* for New England, by Dr. Francis H. Brown, soon to be issued by Cupples, Upham & Co., will contain much new data and information on medical matters, carefully compiled by the author. The work has grown to such importance that no physician or surgeon in the country should be without it, containing as it does more information respecting the medical profession than any other manual in the market.

— The *London Medical News* is responsible for the following:—

"SURGICAL CUTENESS. An instance of surgical 'cuteness' is just recorded from Paris, the subjects of which are those miserable creatures, as stupid as they are ugly, yclept poodles. It has occurred to a veterinarian that by a slight modification of nature's arrangement the poodle's tail can be converted into a convenient handle, wherewith the animal may, as occasion requires, be lifted from place to place. He shaves the dog neatly, scarifies the tip of its tail, makes an incision for the reception of the tip beneath the skin of the animal's back a little behind the fore shoulder by means of a transverse cut, then, lifting the dermic tissues with the handle of the scalpel until a sufficient excavation is

made, he inserts the tip of the tail in the wound and securely bandages it there. The result is a teapot sort of production that is eminently suggestive of the necessity for an appointment on the part of the Society for the Prevention of Cruelty to Animals."

— Among the perils to which man is subject by his environment we now have that of flies, and light is thrown upon the noxiousness of one of the plagues of Egypt, to which the race has been unconsciously exposed ever since the days of Pharaoh. Dr. Grassi has published in the *Gazzetta degli Ospitali* for July 25th the results of some observations in which he discovered unchanged in the feces of flies the eggs of various kinds of worms, including the tape-worm, the thread-worm, and the whip-worm, the flies having been fed on food containing these delicacies. Fly-blown meat is thus a source of infection. The fly-trap must be added to the antiseptic armamentarium.

— It is said in the New York correspondence of a daily contemporary that Van Marck, the famous cattle painter, has the painter's cramp so badly as to be unable to wield the brush with his right hand. He has been idle for the last few months, and will begin to work with his other hand if he does not soon recover. According to the same authority some of our Americans—Wynant and F. E. Church among them—paint entirely with their left hands.

— The "Medical Venus" was, according to Mr. Anthony Trollope, in his autobiography, the object of anxious inquiry on the part of an individual whom he met in some of the art galleries of Europe. This person finally found the aim of his search at the Uffizi Palace at Florence under the better-known title of the Venus de Medici. Whether it was the anatomical perfections or the surgical deficiencies of this celebrated statue which suggested the new title we are not informed. The name, however, presents for our sisters in the profession a new tutelar divinity possessing certain advantages over the god who for so many centuries has stood as the poetic representative of the healing art. Now the unfortunate limitations in the symbolism of Apollo may be remedied by a transfer of worship on the part of the female practitioners to the Medical Venus.

NEW YORK.

— The Hudson County Grand Jury has made a presentment respecting the pollution of the Passaic River by the sewers and factory refuse of the city of Newark, and recommends that the Newark authorities should construct an intercepting sewer which shall carry the sewage into Newark Bay, and thus prevent the danger which now threatens the health of the people of Jersey City and Bayonne from the contamination of their water supply.

— Dr. E. W. Martin, one of the milk inspectors in the service of the State Board of Health, recently found that a firm at Chester, New York, which manufactures an immense quantity of "Neufchâtel" cheese for sale in New York City, were using skimmed milk, and supplying the fatty matter, lost by removing the cream, with lard; emulsifying machines being used for

blending the latter with the skimmed milk. On receiving his report the State Board of Health referred the matter to the local health board, which, at a meeting held December 10th, appointed a committee to procure the indictment of the firm by the next Grand Jury.

— The Aqueduct Commission have adopted for the new aqueduct the route known as the modified line of the Hudson River route, which passes through the Pocantico and Saw-mill River valleys, some distance back from the Hudson, to a point near South Yonkers, where it is intersected by the line of the Hudson River route, which it follows to the Harlem River.

— A meeting in behalf of the Charity Organization was held at the hall of the Union League Club on the 5th of December, at which addresses were made by Messrs. Parke Godwin, Joseph H. Choate, and George William Curtis, Chief Justice Daly, and the Rev. Dr. Rylance, while the Rev. Theodore Williams explained the working of the system of charity organization in Boston.

— At a meeting of the Academy of Medicine held December 20th, Dr. Charles Heitzman made a report on the progress of biology in Europe, which was principally devoted to the state of opinion in regard to his own peculiar views which he found during a recent trip abroad. These views were enunciated in 1872 and 1873, and as it required an unusually well-trained eye and exceptionally good lenses to discover the appearances which he described, he said he was not surprised to find that the scientific world was slow about adopting his theory of tissue structure. One of the first claims that he had made was in regard to protoplasm, which had always been supposed to be structureless, but which he discovered to have a well-marked reticulum; the net-work building up the nucleus and the nucleoli consisting of living matter. This view was now adopted by many of the best authorities in Europe, although there were some exceptions. Beale had claimed that the nucleus alone consisted of germinal matter; but he contended that the nucleus was simply the reticulum in more compact form. Contrary to the views of the advocates of the cell doctrine, he believed that the basis or intermediate structure was not destitute of life, but endowed with the same life as the ensheathed elements. On this was based a new view of the structure of the whole body. He stated that Stricker, after six years of labor, had definitely acknowledged that his theory of the constitution of basis structure was correct. In the cornea of a frog in a state of slight inflammation he had distinctly observed that the basis structure was composed of a mass of filaments in undulating motion. Stricker in the last volume of his Pathology had given him full credit for all his discoveries, and admitted that there was no difference, as regards life and the power of reproduction, between the reticulum and the cells proper; while Spieka, of Prague, had announced in his latest publication, as the result of his investigations, that the time had now come when the old cell doctrine must be given up. Both Stricker and himself, as well as other observers, now denied entirely that there were any wandering corpuscles, as

first claimed by Cohnheim, and if they were right, the whole pathology of inflammation would have to be changed. He then went on to speak of the structure of epithelial tissue, which in 1873 he had claimed to be distinctly reticular, and in regard to which some of the best observers in Europe now coincided with him. Finally, he argued against the conclusions of Koch on the subject of tuberculosis, and said that he was fully in accord with Stricker and his followers, who held that the bacillus was simply a product, and not the cause, of tuberculosis. For a number of years he had taught that tuberculosis was a strictly constitutional disease, which occurred only when there was already a lack of living matter in the system for the reproduction of blood corpuscles. His opinions on this subject were based on the observations which he had made in three hundred post-mortem examinations of those dying with tuberculosis.

Dr. William H. Welsh, Professor of Pathological Anatomy and General Pathology in Bellevue Hospital Medical College, made some remarks upon Dr. Heitzman's address, in which he took up the subjects treated upon in succession, and stated that he could not agree with him upon any prominent point. Heitzman and Stricker stood almost alone in their peculiar opinions, and he thought that for the present, at least, the matter must be left *sub judice*.

— The Hospital Saturday and Sunday Association has published its annual statement and appeal. The hospitals which are represented in the Association, and which are to receive the benefit of the December collection (with the exception of the Roosevelt and New York Hospitals, which waive their claim to a share of the undesignated contributions this year) are as follows: nine general hospitals; four hospitals for diseases of women or children, or both; two hospitals for the ruptured and the crippled; four hospitals for diseases of the eye, ear, or throat, or all combined; three hospitals for incurables; and the New York Skin and Cancer Hospital. In the statement is given a synopsis of the work and resources of each of these institutions, including the total expenses, the amount expended during the year on enlargement and improvements, the amount expended in the care of patients, the total income from invested funds, the amount received from paying patients, the amount received from city, county, or State appropriations, the amount received from contributions not made to the permanent fund, the receipts applicable to current expenses, the total number of patients treated, the number of free patients, the total number of days of hospital care, the number of days of hospital care for free patients, the average cost per patient, and the average cost per day per capita. In three different hospitals 10,442 patients were treated during the year ending September 30th, and of these 7533 were free patients. With the city's growth there is a steady increase of work on the part of the hospitals, while, on the other hand, the regular incomes of many of them are considerably reduced because invested funds which formerly paid five, six, or seven per cent. interest are now returning only three, four, or five per cent.

Under these circumstances it is trusted that the public will make a liberal response to the appeal of the Association. The collection will be made on Saturday and Sunday, December 29th and 30th.

—The new east wing of the City Asylum for the Insane on Ward's Island, which was recently completed at a cost of \$100,000, was damaged by fire to the extent of \$20,000 on the morning of December 21st, but, fortunately, no patient or employee was injured or killed. There were ninety patients in this wing, of whom no less than fifty-nine were bed-ridden, and altogether 497 patients were removed from the wings east of the central building to the wards in the western wings of the hospital. There was no panic, and great credit is due to Dr. Macdonald, the superintendent, and his assistants for the manner in which they were transferred. Great complaint was made of the inadequacy of the provision on Ward's Island for the extinguishing of fires breaking out in the public institutions situated there, and it was merely a matter of good fortune that the present conflagration was not more disastrous in its character and consequences. In February last the chief of the Fire Department called special attention to the very defective arrangements on the island, but nothing was ever done to remedy the evil.

—At its last meeting the Board of Aldermen passed an ordinance making it compulsory on the part of the electric light companies to place their wires below the surface of the ground within two years from the present time. During the discussion of the measure a communication was read from the Board of Health in which it was stated that in the last three years there had been one death in the city by shock from an electric current, and two deaths of employees from other accidental causes. It is said to be a fact that thus far no satisfactory system of underground wires has yet been devised, but the period of two years specified in the ordinance will allow the companies sufficient time to solve the problem.

PHILADELPHIA.

—The health of this city seems to be unusually good, and if it were not for occasional suicides and accidents the undertakers would be in danger of finding their occupation gone. The doctors are now largely engaged in brushing up their acquaintance with the classics, investigating bacilli, or talking politics, according to the bent of their minds.

—The commission appointed by the Governor of the State to inquire into the mental condition of a murderer named McGinnis, now lying under sentence of death in the County Prison (who shot both his wife and mother-in-law, the former recovering, the latter not), has just made its report. Of the five members of the commission Drs. Thomas G. Morton, Charles K. Mills, S. Preston Jones, William P. Moon, and Thomas H. Andrews, all except Dr. Morton declared the man to be insane, his principal delusion being with regard to his wife's unfaithfulness, but also having hallucinations and illusions of sight and hearing, the victim of delusional monomania. Dr. Morton

dissented from the majority report, and declared the man sound in mind and body. The charges against his wife constituted, in his mind, part of his systematic brutality to her, and having some foundation in rumor; the fact that it was nothing but a delusion not having been established by evidence. Strange to say both the majority and minority reports agree in their recommendation of imprisonment for life; the former on the ground that Pennsylvania has no insane asylum secure enough to keep such insane criminals, the latter in order to demonstrate the truth of the proposition that the man is sane, and because of scruples against capital punishment.

—Professor Da Costa has had some very satisfactory results from the treatment of dyspnoea by quabacho. In a recent lecture he said that in his experience it had been especially serviceable in two classes of cases: (1) in purely nervous asthma he had found it to be invaluable; (2) in cases which have been rather loosely called cardiac asthma, cases in which a heart lesion has produced failure of cardiac contraction and consequent congestion of the lungs, he had also known it to be very useful. It may serve as a cardiac tonic or may do good solely by its action upon the respiratory centre in the medulla. Whatever may be the explanation, however, it gives wonderful relief in appropriate cases. The way in which he gives it is the fluid extract in doses of twenty minims every hour, gradually increasing the amount, some patients requiring as much as a drachm before relief is obtained. The good effects are observed usually after two or three doses have been taken. The taste is well covered by using equal quantities of the French syrup of red orange and water as the vehicle. In this form it usually agrees with the stomach. As the respiratory symptoms are relieved the remedy may be given at longer intervals.

—Commenting recently upon a case of myelitis, Da Costa spoke of an old history of syphilitic infection, and pointed out the fact that the spinal disease was not necessarily syphilitic because the patient had at one time had a chancre. Referring to the prevalent error of attributing all the subsequent events of life to syphilis, he declared that if this man were to cut his throat some would be ready to regard it as a syphilitic manifestation.

—Dr. R. J. Levis recently operated upon an unusual case at the Pennsylvania Hospital. A man, forty-three years of age, gave a history of difficulty in defecation, in its origin dating back some three years. Of late he had been obliged to resort to purgatives and enemata in order to secure evacuation. Hardened faeces were sometimes the cause of some bleeding from the rectum. Two years ago he suffered with an inflammatory trouble in the perineal region, and with retention of urine. One year ago he detected a small tumor within the rectum by the introduction of his finger to relieve the tenesmus. It was then the size of a walnut. This tumor, when he came under observation, had attained the size of a foetal head. By an effort the mass could be made to appear outside the sphincter ani. Upon examination the growth

was found to be beneath the mucous membrane of the bowel, having its origin in the submucous structures of the bowel to which it was attached or in the connective tissue. Dr. Levis grasped the tumor with strong hooks, and pulled it downward, and easily enucleated it. After removal it was found to be rather dense and elastic; it was nearly three inches in diameter, and weighed twenty-four ounces. It was pronounced a spindle-cell sarcoma upon microscopic examination, making it one of the rarest growths in this situation.

Correspondence.

HOSPITAL DUTY, PAST AND PRESENT.

MR. EDITOR.—It will, I hope, be allowed one of the medical elders to intrude himself upon your valuable columns, and venture a few remarks comparing the present with the past, in regard to the performance of hospital duty. In my active days a hospital or dispensary service was considered a position of honor, but of honor to be purchased by hard work. For twenty-five years of my hospital service I think I absented myself but one week, and then my non-attendance was occasioned by severe sickness in my family. I may add that so far from diminishing, my interest grew each year, and had not abated when my failing strength obliged me to offer my resignation, which my colleagues were kind enough to say they accepted with regret. At the present time, however, I hear not only of hospital and dispensary men who frequently absent themselves during their service, but of some who make this an habitual practice, and of others who, while holding a position for years, have never completed a single term of service in full. I do not wish to be regarded as considering that as close application as I happen to have practiced is necessary or even advisable, for certainly a vacation, especially in summer, or a few months of travel for those who can enjoy the opportunity "*donec canities abest morosa*," is desirable, and after years of faithful labor it is right for trusted servants to be allowed an occasional rest. This, however, is entirely different from the conduct of these physicians who have not been long in service, and yet who habitually enjoy their *otium sine dignitate*, leaving to young and inexperienced men the routine work, while they claim the honor of their positions. In how many banks would it be permitted to a cashier to habitually absent himself while a clerk performed his duties? and are not hospital and dispensary positions also positions of trust? Yours very truly,

NESTOR.

VOLUNTARY DISLOCATION OF THE HIP-JOINT.

STERLING, WELD COUNTY, COL., December 10, 1883.

MR. EDITOR.—The following case, falling under my observation, may be worthy a place in your "Medical Notes," for, so far as I know, no similar one in which advantage is gained from the condition involved has been mentioned:—

The patient, a telegraph operator, forty years of age, has, since childhood, been able to dislocate the right hip by a muscular effort at will. After sitting for a

time in the usual posture he throws the head of the femur on to the dorsum ilii, inclines slightly to the right side, and brings the weight of the body to bear on an almost entirely new surface, and when fatigued a second muscular effort replaces it, and he resumes the usual upright position. A well-marked sound accompanies the displacement from the acetabulum. Other joints are normal, although the ligaments of the thumbs are relaxed.

Yours, etc., J. N. HALL, M. D. (Harv.).

THE APPROPRIATION TO PREVENT THE SPREAD OF EPIDEMIC DISEASE.

{ U. S. MARINE HOSPITAL SERVICE, OFFICE OF THE SURGEON-GENERAL, December 22, 1883.

MR. EDITOR,—In your issue of December 20th a correspondent, N****, in attempting to correct what he terms a "false impression" said to be created by your review of the report of the United States Marine Hospital Service for 1883, has fallen into an error. The appropriation for "Preventing the Spread of Epidemic Diseases," being for a specific purpose, does not lapse at the end of a fiscal year. For the benefit of your correspondent, as well as others who may have been misled by his criticism, it may be well to state that there have been two appropriations of \$100,000 each for the fiscal year ended June 30, 1883, and the present year, ending June 30, 1884. The expenses incurred by the United States Marine Hospital Service for the past two fiscal years have been as follows:—

For the fiscal year ended June 30, 1883, \$54,678.10, and for the quarantine season ended November 1st, last, \$39,468.88, a total of \$94,146.98. It will thus be seen that the total expense for the two years has not yet absorbed the first \$100,000 appropriated by Congress, and the second \$100,000, appropriated for the present fiscal year, yet remains in the treasury untouched.

Very respectfully,

CHARLES E. BANKS, P. A. Surgeon, M. H. S.

Miscellany.

EPIDEMIC PNEUMONIA.

We find in the *Medical Press and Circular*, November 21st, an account of a somewhat remarkable epidemic of pneumonia which occurred in Tregnano (Verona) in the months of March and April of the present year. It is furnished by Dr. Roberto Massalongo, of Verona, who published the account in the *Gazetta Med. Ital.*, in July and August.

The scene of the outbreak, from its isolated situation, rendered the observations peculiarly interesting and valuable. Tregnano lies in a rather narrow valley, and contains about 2000 inhabitants. They are spoken of as of a healthy constitution, and as having never been subjected to any epidemic sickness before the one under notice. No peculiar meteorological phenomena were observed previous to the outbreak. The disease first began as an epidemic, that is, as attacking numerous individuals in rapid succession, in a circumscribed portion of the town, hard by a pond in which washing was carried on. The bottom of the pond was in consequence covered with a layer of mud, the water was of a green color and had a disagreeable odor. In

the whole about one hundred persons were attacked. The mortality reached about thirty per cent. All ages were alike affected, but the proportion of cases occurring among males, as compared with females, was about four to one. The first cases were observed in a cluster of houses standing in close proximity to each other, and in each of these two, three, four, and even five individuals were attacked. From these houses as a starting point the disease advanced from door to door, gradually encroaching upon the neighboring localities, until the whole town was subject to it. Those first taken were children, then followed those of middle age, and last of all the old people. No instance was observed in which the attack was preceded by a "cold." The various members of a household were not attacked simultaneously, but in succession; the one in attendance on the sick was usually the one to give way. Prodromal symptoms generally preceded the onset by some days; these were a feeling of malaise, loss of appetite, headache, etc.; in no instance was a rigor observed. Delirium and stupor gave the disease very much the appearance of typhus. The temperature was never observed to be higher than 40.7° C., and its course was not so regular as usual. In some cases, during the whole febrile period, no localization was ascertainable in the lungs, but in all the others it was after one or two days, never on the first. Simultaneously with the appearance of local symptoms, in the majority of cases, the spleen was also observed to enlarge, very frequently also the liver, and sometimes at the height of the disease there was in addition to the above enlargement of the heart. Principally, and at first, the upper portions of the lungs were attacked, and after them the lower; in the great majority of cases both lungs were affected and almost always simultaneously. A simultaneous pleuritic effusion was only observed in four cases. The stage of hepatization lasted usually from seven to nine days, never less than five, and in one third of the cases it lasted more than twelve. Herpes labialis was observed in four cases only. The urine almost invariably contained albumen, the quantity increasing during the usually protracted period of resolution. Many cases were complicated by symptoms of meningitis and articular inflammations in one or more joints. Convalescence was very irregular, very protracted, the patients were very low, suffered from constipation with painful stools, want of appetite, nausea, sleeplessness, vague muscular pains, palpitation on the slightest exertion, the pulse weak, rarely as high as 50. It was remarked that three of the individuals attacked were suffering from phthisis, but none of them had previously suffered from pneumonia. Only two persons suffered relapses. The disease ran a chronic course in one case. In those cases in which the disease proved fatal, in the majority of cases the fatal termination came on in the period of commencing resolution, very rarely at the height of the disorder. In two cases it occurred suddenly during convalescence. After death putrefactive changes came on with striking rapidity. The period of incubation lasted from three to, at most, six days. The treatment consisted mainly in the exhibition of stimulants, antipyretics were but little employed, and with but little effect. Ice bags were, however, more useful. In the sputa, by means of the Weigert-Koch method, the author was able to determine the presence of micro-organisms, which perfectly resembled those described by Klebs, and which are supposed to be characteristic

of pneumonia; their number was greatest in the advanced stages of resolution.

COLORADO CLIMATE FOR CONSUMPTIVES.

Science for September 28 and October 5, 1883, contains a paper by Dr. Samuel A. Fisk, of Denver, Col., on the climatic advantages of Colorado in the arrest and cure of phthisis. The basis of the article is a series of tables collated from the observations of the United States Signal Service, giving a comparative view of various localities with reference to elevation, precipitation, and other elements. The places selected are Augusta, Ga. (the nearest available spot to Aiken, S. C.), Jacksonville, Fla., Boston, Newport, R. I., New York, Philadelphia, Chicago, St. Paul, Denver, Santa Fé, Salt Lake, and Los Angeles, Cal., representing a wide range of locality, and including several resorts especially frequented by consumptives.

The writer first considers the item of high elevation, and discusses its effect on the circulation and respiration as well as the advantages it affords in free ozone, an aseptic atmosphere and observed immunity from the disease on the part of its inhabitants. Denver is 5294 feet above the sea (the highest of any of the places considered except Santa Fé). The extra work put upon the heart by high altitudes is acknowledged, as well as the risks to which it exposes patients with organic cardiac affections. At the height of 5000 feet the heart-beat accelerates by ten strokes per minute, or 14,400 per day. The rapidity of circulation varying directly with the pulse rate and inversely with the atmospheric pressure, the number of circulations of the blood is estimated to be increased nearly 30,000 per day. This increases both the rate of waste and of repair in the body. Pneumonias run a shorter course. The expectoration of consumptives is increased in amount. This may act favorably in early cases by removing the morbid products, but in late cases it would naturally aid in the breaking down of lung tissue. Moreover, increased activity of circulation means increased metamorphosis of tissue, and hence an augmented appetite.

The effect of high altitudes on respiration is to increase the rate as well as the depth of the inspirations. This may be due to diminished atmospheric pressure, which by lessening the resistance to the inspiratory muscles increases their effectiveness. The author doubts the explanation often given for increased respiratory rate at high elevations, namely, that there is a paucity of oxygen, and hence more air must be taken in. He gives figures which seem to show that there is a great excess of oxygen over the requirement of the lungs in each cubic foot of air inspired even at high altitudes, so that there can be nothing like an "oxygen starvation." But, on the other hand, it might be claimed that the diminution of oxygen, while not sufficient to equalize the tension of that gas in the air vesicles and in the blood, is yet sufficient to make that difference in tension less than at lower levels, and so make the osmosis less free than it would be at a lower height, so that the economy might have more difficulty in obtaining its required oxygen. This, however, is a theoretical point. Practically we know that with fuller and more frequent respirations the extreme portions of the lungs, more especially the apices, where morbid processes are apt to begin, are brought into

activity, and hence a beneficial effect is produced. Other tables show a mean humidity of 45.8° at Denver as compared with 68.5° at Boston, and 69° at Jacksonville; an annual precipitation of 14.77 inches as compared with forty-nine inches at Augusta, and fifty-five at Jacksonville.

The wind prevalent at Denver is south, which is the favorable wind for invalids, while the prevalent wind at Los Angeles, west, and that at Augusta and Jacksonville, east, are the unfavorable winds. In regard to the number of clear, fair, and cloudy days, the author says that "in Denver there is only about one eighth of the entire year when an invalid would be kept in the house on account of the weather; in Jacksonville and Augusta he would be confined to the house for the same reason one quarter of the year; in St. Paul he would be kept in-doors between a third and a quarter of the time; while in Boston he would have to be housed a good third of the time."

In conclusion we can only say, by way of criticism, that most of the points the author makes in favor of Denver seem, from the tables, to be still more favorable to New Mexico. And it has been objected by advocates of Aiken that Augusta, though the nearest signal station, is by no means representative of the climate of the former place. The tables certainly, as far as they go, have a permanent value, and the con-

clusions drawn seem for the most part legitimate and quite suggestive.

TRACTION SUTURES.

DR. OSCAR H. ALLIS writes in the *Annals of Anatomy* (September, 1883), regarding the treatment of cases where so large a portion of integument has been cut away — as in removal of the female breast — that the healthy borders cannot be fully approximated, and in which even an attempt to do so is accompanied with such a degree of tension that the sutures soon cut their way out. To distribute this tension he employs a device which he thus describes:—

"After drying the skin thoroughly, I apply strips of adhesive plaster from the margin of the wound in the direction I wish the sutures to hold. I then pass my needle deeply through plaster and skin. After the sutures are in position, and before tightening them, I request an assistant to approximate the margins of the wound by pressure from his hands, while I secure them by twisting the wire.

"Sutures employed in this manner have a firm hold upon the plaster, exert their traction upon a large surface, are less irritating and harmful, and will continue an efficient action much longer than the ordinary integument sutures."

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 15, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	587	211	13.94	17.00	1.19	5.78	.68
Philadelphia.....	846,984	364	134	21.92	14.89	1.92	12.88	5.14
Brooklyn.....	566,689	219	76	18.40	19.60	.46	6.90	4.60
Chicago.....	503,304	200	98	32.00	8.00	7.00	11.50	8.00
Boston.....	362,535	211	62	28.20	16.92	2.35	12.16	6.11
St. Louis.....	350,522	140	57	39.27	18.52	2.14	15.71	5.71
Baltimore.....	332,190	143	50	20.30	14.70	.70	9.80	1.40
Cincinnati.....	255,708	93	33	8.56	24.61	4.28	1.07	—
New Orleans.....	216,140	145	36	18.90	13.30	1.40	1.40	—
District of Columbia.....	177,638	94	43	21.20	8.54	1.07	2.12	2.12
Pittsburg.....(1883)	175,000	46	16	10.90	8.72	6.54	—	2.18
Buffalo.....	155,137	52	14	23.04	11.52	3.84	3.84	5.76
Milwaukee.....	115,578	35	20	17.16	8.58	—	5.72	2.86
Providence.....(1883)	116,755	37	9	2.70	10.80	—	2.70	—
New Haven.....(1883)	73,000	14	8	35.70	14.38	—	7.14	14.28
Charleston.....	49,999	21	6	9.52	4.76	4.76	—	—
Nashville.....	43,461	24	3	8.34	33.36	4.17	—	—
Lowell.....	59,485	32	11	24.90	15.73	6.25	12.50	—
Worcester.....	58,295	32	8	28.13	15.73	3.13	12.50	3.13
Cambridge.....	52,740	15	5	26.66	20.00	—	20.00	—
Fall River.....	49,006	9	4	—	22.22	—	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	5	2	40.00	—	20.00	20.00	—
Springfield.....	33,340	11	4	18.18	9.09	—	9.09	—
Salem.....	27,598	11	1	9.09	—	9.09	—	—
New Bedford.....	26,875	9	2	16.66	—	8.33	8.33	—
Somerville.....	24,985	12	2	9.09	9.09	—	—	9.09
Holyoke.....	21,861	11	4	9.09	9.09	—	—	9.09
Chelsea.....	21,785	10	0	—	—	—	—	—
Taunton.....	21,213	6	2	—	—	—	—	—
Gloucester.....	19,329	9	3	—	55.55	—	—	—
Haverhill.....	18,475	9	2	—	11.11	—	—	—
Newton.....	16,995	8	1	—	20.00	—	—	—
Brockton.....	13,608	5	0	—	—	—	—	—
Newburyport.....	13,537	0	0	—	—	—	—	—
Fitchburg.....	12,405	7	0	42.84	14.28	14.28	14.28	—
Malden.....	12,017	—	—	—	—	—	—	—
Sixty Massachusetts towns.....	259,107	96	17	14.16	25.49	2.83	8.60	2.83

Deaths reported 2722: under five years of age, 944: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhoeal diseases) 536, consumption 418, lung diseases 378, diphtheria and croup 218, scarlet fever 85, typhoid fever 62, diarrhoeal diseases 51, measles 37, malarial fevers 33, whooping-cough 16, puerperal fever 12, erysipelas 10, cerebro-spinal meningitis 11, small-pox six. From *diarrhoeal diseases*, New York and New Orleans nine each. From *measles*, District of Columbia 12, New York 11, Brooklyn three, Baltimore two, Chicago, St. Louis, and Worcester one each. From *malarial fevers*, New Orleans eight, St. Louis seven, New York and Brooklyn six each, Baltimore four, Chicago one. From *whooping-cough*, New York six, Baltimore three, District of Columbia two, Philadelphia, Chicago, St. Louis, Milwaukee, and New Haven one each. From *puerperal fever*, Boston five, New Orleans and Buffalo two each, New York, District of Columbia, Lowell, and Fitchburg one each. From *erysipelas*, New York three, Philadelphia two, Brooklyn, Boston, St. Louis, Baltimore, and Worcester one each. From *cerebro-spinal meningitis*, Philadelphia, Chicago, and Buffalo two each, New York, Boston, Cincinnati, Milwaukee, and Brockton one each. From *small-pox*, New Orleans four, Philadelphia two.

Six cases of small-pox were reported in St. Louis; scarlet fever 47, diphtheria 44, and typhoid fever 14 in Boston; scarlet fever 15, and diphtheria five in Milwaukee.

In 77 cities and towns of Massachusetts, with an estimated population of 1,208,483 (estimated population of the State

1,922,530), the total death-rate for the week was 21.60 against 19.52 and 16.56 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 1st, the death-rate was 23. Deaths reported 3792: acute diseases of the respiratory organs (London) 453, scarlet fever 137, measles 98, fever 76, whooping-cough 66, diarrhoeal diseases 42, diphtheria 33, small-pox (London and Birmingham five each, Sunderland three, Liverpool and Newcastle one each) 15. The death-rates ranged from 16.3 in Bedford to 29.4 in Manchester; Birkenhead 18.2; London 21.8; Bristol 22.1; Sheffield 22.6; Birmingham 23.5; Nottingham 24.1; Leicester 24.2; Leeds 26; Liverpool 26.6; Newcastle-on-Tyne 29.3. In Edinburgh 19.7; Glasgow 26.3; Dublin 25.7.

For the week ending November 24th, in German cities and towns, with an estimated population of 8,749,864, the death-rate was 23.8. Deaths reported 3999; under five years of age, 1769; consumption 537, lung diseases 446, diphtheria and croup 286, diarrhoeal diseases 130, scarlet fever 92, measles and röteln 72, typhoid fever 69, whooping-cough 68, puerperal fever 19. The death-rates ranged from 12.8 in Mannheim to 31.4 in Chemnitz; Königsberg 30.4; Breslau 29.6; Munich 30.1; Dresden 29.7; Berlin 24.6; Leipzig 24; Hamburg 25.6; Cologne 25.5; Frankfurt a. M. 18.1; Strasburg 18.2.

The meteorological record for the week ending December 15th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Daily Mean.	Daily Maximum.	Daily Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Dec., 1883.																			
Sun., 9	30.112	44	54	37	88	60	69	72	W	NW	NW	11	11	10	O	F	C	—	—
Mon., 10	29.996	39	48	31	83	54	72	70	N	SW	W	4	10	13	C	O	O	—	—
Tues., 11	29.967	31	39	27	77	72	90	80	NW	W	NE	11	9	4	C	C	O	—	—
Wed., 12	30.136	28	33	24	62	68	88	73	NW	NE	S	13	7	6	C	C	O	—	—
Thurs., 13	29.938	40	49	27	67	56	88	70	SW	SW	SW	8	16	12	F	C	O	—	—
Fri., 14	29.518	46	54	41	93	79	73	82	S	SW	W	11	13	8	O	O	O	—	—
Sat., 15	29.794	13	42	1	61	61	77	66	NW	NW	W	24	24	13	C	C	C	—	—
Mean, the Week.	29.923	34	54	1				73										5.45	.05

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 22, 1883.

DALY, F. C., passed assistant surgeon. Detached from the Coast Survey Steamer McArthur and ordered to the U. S. S. Adams at Sitka, Alaska.

CURTIS, L. W., assistant surgeon. Detached from the Adams and ordered to the Coast Survey Steamer McArthur.

ROSS, J. W., surgeon. Detached from the U. S. S. Iroquois and ordered to the U. S. S. Onward at Callao, Peru.

HIBBERT, C. T., passed assistant surgeon. Detached from the Onward and ordered home.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM DECEMBER 14, 1883, TO DECEMBER 21, 1883.

CAMPBELL, JOHN, lieutenant-colonel and surgeon. Having completed the duties pertaining to the office of the Medical Director of the late Department of the South, to proceed from Newport Barracks, Ky., to New York City, and assume the duties of attending surgeon in that city. Paragraph 12, S. O. 284, A. G. O., December 12, 1883.

CLEMENTS, BENNETT A., major and surgeon. Relieved from duty as attending surgeon New York City, and detailed as

member of Army Medical Examining Board, now in session in New York City. Paragraph 12, S. O. 284, A. G. O., December 12, 1883.

McKEE, J. C., major and surgeon. Assigned to duty as Medical Director Department of the Columbia. G. O. 31, Department of the Columbia, December 3, 1883.

WILLIAMS, JOHN W., major and surgeon. Leave of absence on surgeon's certificate of disability granted in S. O. 157, November 12, 1883, Department of the Columbia, extended five months on surgeon's certificate of disability. Paragraph 6, S. O. 286, A. G. O., December 14, 1883.

THE SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY will meet at 19 Boylston Place on Wednesday, January 2, 1884, at 7.45 P. M. Papers: A Case of Cysto-Pyelitis, or Pyelo-Cystitis, or Cystitis Coincident with Pyelitis, Dr. E. O. Otis. Abscesses of Abdominal Wall, Dr. W. Ingalls. S. J. MIXTER, Secretary.

BOOKS AND PAMPHLETS RECEIVED.—The Medical Record Visiting List, or Physician's Diary for 1884. New York: William Wood & Co.

A Course of Three Lectures on Locomotor Ataxia. Delivered before the Cincinnati Medical Society by Philip Zenner, A. M., M. D. Reprint. 1883.



